

**Appendix A
DHS Policy Memo 97-005**

Memorandum

Date: November 5, 1997

To: Drinking Water Program
Regional and District Engineers

From: Division of Drinking Water and
Environmental Management

Subject: Policy Memo 97-005 Policy Guidance for Direct Domestic Use of Extremely Impaired Sources

A. General Philosophy

The primary goal of the Drinking Water Program (DWP) is to assure that all Californians are, to the extent possible, provided a reliable supply of safe drinking water. In furtherance of this goal, the DWP continues to subscribe to the basic principle that only the best quality sources of water reasonably available to a water utility should be used for drinking. When feasible choices are available, the sources presenting the least risk to public health should be utilized. Furthermore, these sources should be protected against contamination. Whenever possible, lower quality source waters should be used for nonconsumptive uses, such as irrigation, recreation, or industrial uses, which pose lower health risk.

The use of contaminated water as a drinking water source always poses a greater health risk and hazard to the public than the use of an uncontaminated source because of the chance that the necessary treatment may fail.

The use of an extremely impaired source should not be approved unless the additional health risk, relative to the use of other available drinking water sources, are known, minimized, and considered acceptable.

Water utilities (including wholesalers) should be encouraged to minimize the concentration of man-made toxic substances, naturally occurring contaminants, and pathogenic microorganisms in drinking water supplies, maximum contaminant levels (MCLs) notwithstanding.

Extremely impaired sources that contain or are likely to contain high concentrations of contaminants, multiple contaminants, or unknown contaminants (such as groundwater subject to contamination from a hazardous waste disposal site) should not be considered for direct human consumption where alternatives are available.

Where reasonable alternatives are available, high quality drinking water should not be allowed to be degraded by the planned addition of contaminants. In other words, the MCLs should not be used to condone contamination up to those levels where the addition of those contaminants can be reasonably avoided.

Drinking water quality and public health shall be given greater consideration than costs or cost savings when evaluating alternative drinking water sources or treatment processes.

The DWP recognizes that there are extremely impaired sources in California that need to be cleaned up and for which the resulting product water represents a significant resource that should not be wasted. In some situations, it may be reasonable to consider the use of these treated extremely impaired sources for domestic use. Some communities may not have any choice. In such cases, the public health principles as set forth in this policy should be used to guide the evaluation of such situations.

B. Purpose of Policy Guidance

The purpose of this guidance document is to set forth the position and the basic tenets by which DWP would evaluate proposals, establish appropriate permit conditions, and approve the use of an extremely impaired source for any direct potable use.

An extremely impaired source meets one or more of the following criteria:

- exceeds 10 times an MCL or action level (AL) based on chronic health effects,
- exceeds 3 times an MCL or AL based on acute health effects,
- is a surface water that requires more than 4 log *Giardia*/5 log virus reduction,
- is extremely threatened with contamination due to proximity to known contaminating activities
- contains a mixture of contaminants of health concern
- is designed to intercept known contaminants of health concern.

Examples include:

- Extremely contaminated ground water
- Effluent dominated surface water
- Oilfield produced water
- Water that is predominantly recycled water; urban storm drainage; treated or untreated wastewater; or agricultural return water
- Products of toxic site cleanup programs

It is recognized that the circumstances surrounding each situation may be different. Proposals for the use of extremely impaired sources, therefore, must be considered on a case-by-case basis.

C. Elements of an Evaluation Process for an Extremely Impaired Drinking Water Source

1. Source Water Assessment:

The purpose of the source water assessment for the extremely impaired source is to determine the extent to which the aquifer or surface water is vulnerable to contaminating activities in the area. There may be other contaminants associated with activities that contribute to the known contamination, or other contamination sources that have yet to impact the drinking water source. There may not be drinking water MCLs, AIs or monitoring requirements established for these additional contaminants, but health related information may be available through other programs. The appropriate level of monitoring and treatment to produce a safe drinking water cannot be determined unless the activities that are affecting or may impact raw water quality are understood. The assessment should include:

- Delineation of the source water capture zone
- Identification of contaminant sources
 - Identify the origin of known contaminants found in the source water and predict contaminant level trends
 - Identify chemicals or contaminants used at or generated by facilities responsible for the known contamination
 - Identify all potential contaminant sources and determine the vulnerability of the water source to these contaminant sources

2. Full characterization of the raw water quality:

The appropriate level of monitoring and treatment to produce a safe drinking water cannot be determined unless the raw water quality is fully understood. The following categories should be considered to fully characterize the source water quality:

- Title 22 drinking water regulated and unregulated chemicals
- All chemicals for which drinking water action levels are established
- All chemicals listed pursuant to Safe Drinking Water and Toxic Enforcement Act of 1986
- Microbiological quality
- Priority pollutants
- Gross contaminant measures [total organic carbon (TOC), etc.]
- Any compounds identified under source water assessment.
- Determine variability of contaminant concentrations with time (seasonal and long term)
- Determine variability of contaminant concentrations with pumping rate.
- The detection of any contaminant identified in the raw water quality characterization (step 2) should require assessment of the impact on the source water pursuant to the source water assessment (step 1).

3. Source Protection:

There must be a program in place to control the level of contamination. At a minimum, best management practices for waste handling and waste reduction should be required. In addition, monitoring at the source should be conducted to determine the level of contamination

and to reasonable assure that the contamination level will not increase. Unless the level of contamination is known a determination cannot be made that the proposed treatment is sufficiently adequate and reliable to render the water potable.

If the use of an extremely impaired source is to be approved, the source of the contamination must be controlled to:

- Prevent the level of contamination from rising.
- Minimize the dependence on treatment.

4. Effective Monitoring and Treatment:

The treatment process used to treat the extremely impaired source prior to direct usage in a domestic water distribution system must be commensurate with the degree of risk associated with the contaminants present. As a minimum, treatment of extremely impaired sources shall include use of the best available treatment technology defined for the contaminant(s) by the Environmental Protection Agency. Furthermore, the treatment processes must have reliability features consistent with the type and degree of contamination.

All treatment processes used must be optimized to reliably produce water that contains the lowest concentration of contaminants feasible at all times. The entire flow from the extremely impaired source must pass through the complete treatment process or processes. Any water from other sources that is available for blending prior to entry into the distribution system should be used to provide an additional safety factor.

Multi-barrier treatment is a set of independent treatment processes placed in series, and designed and operated to reduce the levels of a contaminant. Each barrier should effectively reduce the contaminant by a significant fraction of the total required reduction. The treatment processes should address all the contaminants of public health concern in an extremely impaired source. Multi-barrier treatment may be appropriate when:

- The primary treatment is not sufficiently reliable;
- The primary treatment is of uncertain effectiveness;
- There is no direct way to measure the contaminant (e.g., pathogenic microorganism);
- The health effect of the contaminant is acute; and/or
- Very large reductions in contaminant concentration are required.

The description of the proposed monitoring and treatment should include the following:

- Performance standards (field measurable indicator of treatment efficiency);
 - Identify level to assure compliance with the treatment objective
 - The treatment objective for all contaminants should be optimized to the lowest extent feasible and must assure compliance with the MCL/AL at all times.

- Facilities for treating water containing specific contaminants for which the MCL is higher than the maximum contaminant level goal (MCLG) should be designed and operated to meet the MCLG where this can be accomplished in a cost effective manner.
- Operations plan that identifies all operational procedures, failure response triggers, and loading rates, including:
 - Process monitoring plan
 - Process optimization procedures
 - Established water quality objectives or goals
 - Level of operator qualification
- Reliability features
 - Response Plan for failure to meet the treatment objective
 - Alternative disposal methods
 - Shutdown triggers and restart procedures
- Compliance monitoring and reporting program
- Notification plan
- Extremely impaired source water quality surveillance plan

The water quality surveillance plan should include monitoring between the origin of the contamination and the extremely impaired source that is proposed for drinking water.

5. Human Health Risks Associated with Failure of Proposed Treatment:

Treatment technologies are not failure proof, and insufficiently treated or untreated water may, on occasion, pass through the treatment process and into the distribution system. An assessment must be performed that includes:

- An evaluation of the risks of failure of the proposed treatment system.

The proposed treatment system must be evaluated in terms of its probability to fail, thereby exposing customers to insufficiently treated or untreated drinking water from the extremely impaired source.

All treatment failure modes are to be evaluated. The evaluation must include an assessment of the proposed frequency of monitoring as it relates to protection of the public from insufficiently treated or untreated drinking water.

- An assessment of potential health risks associated with failure of the proposed treatment system. The health assessment must take into account:

- o the duration of exposure to contaminated drinking water that would result from such a failure
- o the human health risks associated with such exposure to insufficiently treated or untreated water over the course of that failure, considering the risks of disease from microbiological organism, and the risks of acute and chronic effects (including cancer risks) from chemical contaminants
- o potential cumulative risks, due to multiple failures

When risks of adverse health effects from treatment failure are not acceptable, then additional treatment safeguards must be used for the protection of public health, or the proposal must be rejected.

6. Identification of alternatives to the use of the extremely impaired source and compare the potential health risk associated with these to the project's potential health risk.

Use of alternative sources of drinking water reasonably available to a water utility should be evaluated as to health risk (assuming MCLs are, or can be, met), and compared to the use of the extremely impaired source.

In evaluating the relative risk comparison of the extremely impaired source and alternative drinking water sources, additive effects of multiple contaminants are an important consideration. Generally, consideration of allowing direct potable use of an extremely impaired source should be limited to a single toxic contaminant or a limited number of similar chemicals that can be reliably treated with the same process.

The comparison of alternatives should include a comparison of the risks of treatment failure for the alternatives, as well as for the extremely impaired source (step 5).

7. Completion of the California Environmental Quality Act (CEQA) review of the project:

CEQA review of the project must be completed.

8. Submittal of a permit application:

The public water system(s) collecting, treating and distributing water from the extremely impaired source must submit a permit application for the use of the extremely impaired source that includes the items identified above. A supplier of treated water to a public water system is a water wholesaler and must be permitted as a public water system, as required by the Safe Drinking Water Act.

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9. Public hearing:

A public hearing must be held to identify concerns of consumers who will be served water from the extremely impaired source and to assure that all parties have a chance to provide relevant information.

10. DHS evaluation:

DHS staff shall conduct an evaluation of the application and make recommendations.

11. Requirements for DHS approval:

The following findings are required of DHS for approval to use an extremely impaired source:

- Drinking water MCLs and ALs will not be exceeded if the permit is complied with, and
- The potential for human health risk is minimized, and the risk associated with the project is less than or equal to the alternatives.

12. Issuance or denial of permit:

DHS either issues a permit or denies a permit for the use of the extremely impaired source. If a permit is issued, it shall include all necessary treatment, compliance monitoring, operational, and reporting requirements.

<Original signed by>

David P. Spath, Ph.D., P.E., Chief

Appendix B
JPL Monitoring Well Data

TABLE B-1
Summary of Constituents Analyzed for in Groundwater Collected from Jet Propulsion Laboratory Monitoring Wells
During the Long-Term Quarterly Monitoring Program

Analysis	Analyte	CAS	Units	Number of Detects	Number of Samples	Frequency of Detection	Minimum Detected Value	Maximum Detected Value
RAD	Gross Alpha	ALPHA	pCi/L	4	4	100%	2.0	12
RAD	Gross Beta	BETA	pCi/L	4	4	100%	3.0	6.0
anion	Fluoride	16984-48-8	mg/L	45	45	100%	0.15	1.22
MET	Sodium	7440-23-5	mg/L	1158	1163	100%	2.5	122
MET	Calcium	7440-70-2	mg/L	1159	1165	99%	1.8	180
MET	Potassium	7440-09-7	mg/L	1145	1163	98%	0.99	9.7
MET	Magnesium	7439-95-4	mg/L	1144	1163	98%	0.25	58
anion	Sulfate	14808-79-8	mg/L	202	207	98%	2.1	194.00
anion	Chloride	16887-00-6	mg/L	201	207	97%	7.6	160
MET	Strontium	7440-24-6	mg/L	274	290	94%	0.052	1.2
anion	Nitrate	14797-55-8	mg/L	189	207	91%	0.07	17.9
MET	Iron	7439-89-6	mg/L	899	1153	78%	0.012	9.1
MET	Barium	7440-39-3	mg/L	217	290	75%	0.021	0.28
MET	Zinc	7440-66-6	mg/L	149	290	51%	0.020	1.0
VOC	Chloroform	67-66-3	µg/L	1006	2,163	47%	0.30	58
VOC	Dibromofluoromethane	1868-53-7	µg/L	268	676	40%	3.9	2,850
PERCHLORATE	Perchlorate	14797-73-0	mg/L	684	1,741	39%	0.0032	58.5
MET	Chromium	7440-47-3	mg/L	686	2,062	33%	0.0006	0.42
VOC	Trichloroethene	79-01-6	µg/L	721	2,177	33%	0.30	73
VOC	Tetrachloroethylene	127-18-4	µg/L	633	2,163	29%	0.06	33
PEST	Tributyltin	688-73-3	µg/L	2	7	29%	0.0020	0.0020
MET	Aluminum	7429-90-5	mg/L	40	162	25%	0.050	1.1
VOC	Carbon Tetrachloride	56-23-5	µg/L	454	2,163	21%	0.30	310
BNA	Atrazine	1912-24-9	µg/L	3	20	15%	0.070	0.080
MET	Copper	7440-50-8	mg/L	39	290	13%	0.010	2.1
BNA	Di-n-butylphthalate	84-74-2	µg/L	19	158	12%	0.50	20
BNA	Simazine	122-34-9	µg/L	2	20	10%	0.10	0.10
MET	Nickel	7440-02-0	mg/L	24	290	8%	0.010	0.11
BNA	bis(2-Ethylhexyl)phthalate	117-81-7	µg/L	18	227	8%	0.50	98
MET	Lead	7439-92-1	mg/L	103	1,318	8%	3.00E-05	0.051
VOC	1,1-Dichloroethane	75-34-3	µg/L	167	2,163	8%	0.30	3.9
MET	Arsenic	7440-38-2	mg/L	106	1,396	8%	0.0015	0.017
VOC	1,1-Dichloroethene	75-35-4	µg/L	130	1,822	7%	0.40	12
VOC	Trichlorotrifluoroethane	26523-64-8	µg/L	103	1,525	7%	0.50	9.2
VOC	Methylene Chloride	75-09-2	µg/L	139	2,241	6%	0.30	15
INORG	Cyanide	57-12-5	mg/L	12	195	6%	0.0050	0.021
MET	Antimony	7440-36-0	mg/L	17	290	6%	0.0070	0.021
BNA	1,4-Dioxane	123-91-1	µg/L	20	466	4%	0.4	10
VOC	Methyl-t-Butyl Ether (MTBE)	1634-04-4	µg/L	45	1,182	4%	0.30	7.1
MET	Chromium, Hexavalent	18540-29-9	mg/L	72	1,894	4%	0.0050	0.055
VOC	1,2-Dichloroethane	107-06-2	µg/L	78	2,163	4%	0.30	8.9
VOC	Bromodichloromethane	75-27-4	µg/L	71	2,163	3%	0.40	1.9
VOC	Methyl Isobutyl Ketone	108-10-1	µg/L	61	2,115	3%	--	--
VOC	cis-1,2-Dichloroethene	156-59-2	µg/L	48	2,163	2.2%	0.3	3.4
PAH	Pyrene	129-00-0	µg/L	3	158	2%	33	48
VOC	1,1,2-Trichlorotrifluoroethane	76-13-1	µg/L	11	596	2%	0.60	6.0
PAH	Acenaphthene	83-32-9	µg/L	2	138	1%	35	36
BNA	Nitrosodipropylamine	621-64-7	µg/L	2	138	1%	22	24
BNA	2-Chlorophenol	95-57-8	µg/L	2	144	1%	50	59
BNA	4-Chloro-3-methylphenol	59-50-7	µg/L	2	144	1%	59	63
BNA	4-Nitrophenol	100-02-7	µg/L	2	144	1%	79	79
BNA	Phenol	108-95-2	µg/L	2	144	1%	49	53
VOC	Trichlorofluoromethane	75-69-4	µg/L	25	1,822	1%	0.30	1.8
BNA	N-Nitrosodimethylamine	62-75-9	µg/L	2	152	1%	0.0022	0.0022
BNA	2,4-Dinitrotoluene	121-14-2	µg/L	2	158	1%	39	41
VOC	2-Butanone	78-93-3	µg/L	21	1,705	1%	0.70	420
VOC	Ethylbenzene	100-41-4	µg/L	22	1,854	1%	0.30	14.0
VOC	Bromochloromethane	74-97-5	µg/L	23	2,085	1.1%	0.3	0.8
VOC	Dibromochloromethane	124-48-1	µg/L	23	2,163	1%	0.40	2.2
MET	Mercury	7439-97-6	mg/L	3	289	1%	2.00E-04	3.00E-04
BNA	Pentachlorophenol	87-86-5	µg/L	2	203	1%	81	84
VOC	Styrene	100-42-5	µg/L	19	2,163	1%	0.40	0.90
VOC	Acetone	67-64-1	µg/L	7	827	0.8%	1	25
VOC	Toluene	108-88-3	µg/L	18	2,163	1%	0.30	1.2
BNA	Fluoranthene	206-44-0	µg/L	1	136	1%	39	39
MET	Cadmium	7440-43-9	mg/L	2	290	1%	0.0050	0.0070
MET	Molybdenum	7439-98-7	mg/L	2	290	1%	0.050	0.075
VOC	Chloromethane	74-87-3	µg/L	14	2,085	0.7%	0.80	1.4
PAH	benzo (g,h,i) perylene	191-24-2	µg/L	1	156	1%	10	10
PAH	benzo(k)fluoranthene	207-08-9	µg/L	1	156	1%	11	11
PAH	Chrysene	218-01-9	µg/L	1	156	1%	21	21
PAH	Indeno(1,2,3-c,d)pyrene	193-39-5	µg/L	1	156	1%	10	10
BNA	Phenanthrene	85-01-8	µg/L	1	156	1%	29	29
PAH	benzo(a)pyrene	50-32-8	µg/L	1	195	1%	16	16
PAH	benzo(b)fluoranthene	205-99-2	µg/L	1	195	1%	28	28
VOC	1,1,1-Trichloroethane	71-55-6	µg/L	9	1,822	0.5%	0.50	1.4
VOC	1,2,3-Trichlorobenzene	87-61-6	µg/L	8	1,744	0.5%	0.50	1.2
VOC	Chloroethane	75-00-3	µg/L	9	2,230	0.4%	--	--
MET	Selenium	7782-49-2	mg/L	1	290	0.3%	0.012	0.012
MET	Thallium	7440-28-0	mg/L	1	290	0.3%	0.10	0.10
PAH	benzo(a)anthracene	56-55-3	µg/L	1	331	0.3%	12	12
VOC	Bromoform	75-25-2	µg/L	5	1,822	0.3%	0.50	1.5
VOC	Carbon disulfide	75-15-0	µg/L	2	827	0.2%	0.60	1.10

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VOC	m,p-Xylene	108-38-3	µg/L	4	1,822	0.2%	0.60	1.3
VOC	trans-1,2-Dichloroethene	156-60-5	µg/L	4	2163	0.2%	0.4	1.8
BNA	Naphthalene	91-20-3	µg/L	3	1,813	0.2%	0.70	1.9
VOC	Benzene	71-43-2	µg/L	3	1,822	0.2%	0.50	1.3
BNA	1,2,4-Trichlorobenzene	120-82-1	µg/L	2	1,474	0.1%	27	31
VOC	Hexane	110-54-3	µg/L	1	749	0.1%	4.6	4.6
BNA	1,4-Dichlorobenzene	106-46-7	µg/L	2	1,552	0.1%	28	32
VOC	1,3-dichloropropane	142-28-9	µg/L	2	2,152	0.1%	--	--
VOC	1,2,3-Trichloropropane	96-18-4	µg/L	1	1,744	0.1%	0.80	0.80
VOC	Vinyl Chloride	75-01-4	µg/L	1	1,822	0.1%	0.70	0.70
VOC	1,1,1,2-Tetrachloroethane	630-20-6	µg/L	--	1,744	0%	--	--
VOC	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	--	1,822	0%	--	--
VOC	1,1,2-Trichloroethane	79-00-5	µg/L	--	1,822	0%	--	--
VOC	1,1-Dichloropropene	563-58-6	µg/L	--	1,744	0%	--	--
VOC	1,2-Dibromo-3-Chloropropane	96-12-8	µg/L	--	676	0%	--	--
VOC	1,2-Dibromoethane (EDB)	106-93-4	µg/L	--	676	0%	--	--
VOC	1,2-Dichloroethene	540-59-0	µg/L	--	549	0%	--	--
VOC	1,2-Dichloropropane	78-87-5	µg/L	--	1,822	0%	--	--
VOC	1,3,5-Trimethylbenzene	108-67-8	µg/L	--	1,744	0%	--	--
VOC	2,2-Dichloropropane	594-20-7	µg/L	--	1,744	0%	--	--
VOC	2-Chloroethanol	107-07-3	µg/L	--	19	0%	--	--
VOC	2-Chloroethylvinylether	110-75-8	µg/L	--	324	0%	--	--
VOC	2-Chlorotoluene	95-49-8	µg/L	--	1,744	0%	--	--
VOC	2-Hexanone	591-78-6	µg/L	--	486	0%	--	--
VOC	4-Chlorotoluene	106-43-4	µg/L	--	1,744	0%	--	--
VOC	Acrolein	107-02-8	µg/L	--	33	0%	--	--
VOC	Acrylonitrile	107-13-1	µg/L	--	441	0%	--	--
VOC	Allyl Alcohol	107-18-6	µg/L	--	19	0%	--	--
VOC	Bromobenzene	108-86-1	µg/L	--	1,744	0%	--	--
VOC	Bromomethane	74-83-9	µg/L	--	1,822	0%	--	--
VOC	Chlorobenzene	108-90-7	µg/L	--	1,822	0%	--	--
VOC	cis-1,3-Dichloropropene	10061-01-5	µg/L	--	1,822	0%	--	--
VOC	Cyclohexanone	108-94-1	µg/L	--	19	0%	--	--
VOC	Dibromomethane	74-95-3	µg/L	--	1,744	0%	--	--
VOC	Dichlorodifluoromethane	75-71-8	µg/L	--	1,744	0%	--	--
VOC	Ethanol	64-17-5	µg/L	--	427	0%	--	--
VOC	Isobutyl Alcohol	78-83-1	µg/L	--	19	0%	--	--
VOC	Isopropylbenzene	98-82-8	µg/L	--	1,744	0%	--	--
VOC	n-Butylbenzene	104-51-8	µg/L	--	1,744	0%	--	--
VOC	n-Propylbenzene	103-65-1	µg/L	--	1,744	0%	--	--
VOC	o-Xylene	95-47-6	µg/L	--	1,822	0%	--	--
VOC	p-isopropyltoluene	99-87-6	µg/L	--	1,744	0%	--	--
VOC	Propargyl Alcohol	107-19-7	µg/L	--	19	0%	--	--
VOC	sec-Butylbenzene	135-98-8	µg/L	--	1,744	0%	--	--
VOC	tert-Butylbenzene	98-06-6	µg/L	--	1,744	0%	--	--
VOC	Tetrahydrofuran	109-99-9	µg/L	--	486	0%	--	--
VOC	trans-1,3-Dichloropropene	10061-02-6	µg/L	--	1,822	0%	--	--
VOC	Vinyl Acetate	108-05-4	µg/L	--	78	0%	--	--
PAH	Acenaphthylene	208-96-8	µg/L	--	156	0%	--	--
PAH	Anthracene	120-12-7	µg/L	--	156	0%	--	--
MET	Beryllium	7440-41-7	mg/L	--	290	0%	--	--
MET	Cobalt	7440-48-4	mg/L	--	290	0%	--	--
MET	Silver	7440-22-4	mg/L	--	290	0%	--	--
MET	Vanadium	7440-62-2	mg/L	--	290	0%	--	--
BNA	1,1'-(Methylbis(oxyl))bis-2-ch	11MOCE	µg/L	--	2	0%	--	--
BNA	1,2,4-Trimethylbenzene	95-63-6	µg/L	--	1,336	0%	--	--
BNA	1,2-Diphenylhydrazine	122-66-7	µg/L	--	136	0%	--	--
BNA	2,4,5-Trichlorophenol	95-95-4	µg/L	--	142	0%	--	--
BNA	2,4,6-Trichlorophenol	88-06-2	µg/L	--	142	0%	--	--
BNA	2,4-Dichlorophenol	120-83-2	µg/L	--	142	0%	--	--
BNA	2,4-Dimethylphenol	105-67-9	µg/L	--	142	0%	--	--
BNA	2,4-Dinitrophenol	51-28-5	µg/L	--	142	0%	--	--
BNA	2,6-Dinitrotoluene	606-20-2	µg/L	--	136	0%	--	--
BNA	2-Chloronaphthalene	91-58-7	µg/L	--	136	0%	--	--
BNA	2-Methyl-4,6-dinitrophenol	534-52-1	µg/L	--	142	0%	--	--
BNA	2-Methylnaphthalene	91-57-6	µg/L	--	136	0%	--	--
BNA	2-Methylphenol	95-48-7	µg/L	--	142	0%	--	--
BNA	2-Nitroaniline	88-74-4	µg/L	--	136	0%	--	--
BNA	2-Nitrophenol	88-75-5	µg/L	--	142	0%	--	--
BNA	3,3'-Dichlorobenzidine	91-94-1	µg/L	--	136	0%	--	--
BNA	3-Nitroaniline	99-09-2	µg/L	--	136	0%	--	--
BNA	4-Bromophenylphenylether	101-55-3	µg/L	--	136	0%	--	--
BNA	4-Chloroaniline	106-47-8	µg/L	--	136	0%	--	--
BNA	4-Chlorophenylphenylether	7005-72-3	µg/L	--	136	0%	--	--
BNA	4-Methylphenol	106-44-5	µg/L	--	142	0%	--	--
BNA	4-Nitroaniline	100-01-6	µg/L	--	136	0%	--	--
BNA	Aalachlor	15972-60-8	µg/L	--	20	0%	--	--
BNA	Aldrin	309-00-2	µg/L	--	20	0%	--	--
BNA	alpha-Chlordane	5103-71-9	µg/L	--	20	0%	--	--
BNA	Aniline	62-53-3	µg/L	--	136	0%	--	--
BNA	Benzidine	92-87-5	µg/L	--	136	0%	--	--
BNA	Benzoic Acid	65-85-0	µg/L	--	142	0%	--	--

TABLE B-1
Summary of Constituents Analyzed for in Groundwater Collected from Jet Propulsion Laboratory Monitoring Wells
During the Long-Term Quarterly Monitoring Program

Analysis	Analyte	CAS	Units	Number of Detects	Number of Samples	Frequency of Detection	Minimum Detected Value	Maximum Detected Value
BNA	Benzyl Alcohol	100-51-6	µg/L	--	134	0%	--	--
BNA	bis(2-Chloroethoxy)methane	111-91-1	µg/L	--	134	0%	--	--
BNA	bis(2-Chloroethyl)ether	111-44-4	µg/L	--	136	0%	--	--
BNA	bis(2-Chloroisopropyl)ether	108-60-1	µg/L	--	136	0%	--	--
BNA	Bromacil	314-40-9	µg/L	--	20	0%	--	--
BNA	Butachlor	23184-66-9	µg/L	--	20	0%	--	--
BNA	Butylbenzylphthalate	85-68-7	µg/L	--	156	0%	--	--
BNA	Caffeine	58-08-2	µg/L	--	20	0%	--	--
BNA	Di-(2-Ethylhexyl)adipate	103-23-1	µg/L	--	20	0%	--	--
BNA	Dibenzofuran	132-64-9	µg/L	--	136	0%	--	--
BNA	Dieldrin	60-57-1	µg/L	--	20	0%	--	--
BNA	Diethylphthalate	84-66-2	µg/L	--	156	0%	--	--
BNA	Dimethoate	60-51-5	µg/L	--	20	0%	--	--
BNA	Dimethylphthalate	131-11-3	µg/L	--	156	0%	--	--
BNA	Di-n-octylphthalate	117-84-0	µg/L	--	136	0%	--	--
BNA	Endrin	72-20-8	µg/L	--	20	0%	--	--
BNA	Fluorene	86-73-7	µg/L	--	156	0%	--	--
BNA	gamma-BHC (Lindane)	58-89-9	µg/L	--	20	0%	--	--
BNA	gamma-Chlordane	510-37-4	µg/L	--	20	0%	--	--
BNA	Heptachlor	76-44-8	µg/L	--	20	0%	--	--
BNA	Heptachlor Epoxide	1024-57-3	µg/L	--	20	0%	--	--
BNA	Hexachlorobenzene	118-74-1	µg/L	--	195	0%	--	--
BNA	Hexachlorobutadiene	87-68-3	µg/L	--	1,472	0%	--	--
BNA	Hexachlorocyclopentadiene	77-47-4	µg/L	--	156	0%	--	--
BNA	Hexachloroethane	67-72-1	µg/L	--	136	0%	--	--
BNA	Isophorone	78-59-1	µg/L	--	156	0%	--	--
BNA	m-Dichlorobenzene (1,3-DCB)	541-73-1	µg/L	--	1,550	0%	--	--
BNA	Methoxychlor	72-43-5	µg/L	--	20	0%	--	--
BNA	Metolachlor	51218-45-2	µg/L	--	20	0%	--	--
BNA	Metribuzin	21087-64-9	µg/L	--	20	0%	--	--
BNA	Molinate	2212-67-1	µg/L	--	20	0%	--	--
BNA	Nitrobenzene	98-95-3	µg/L	--	136	0%	--	--
BNA	N-Nitrosodiphenylamine	86-30-6	µg/L	--	136	0%	--	--
BNA	o-Dichlorobenzene (1,2-DCB)	95-50-1	µg/L	--	1,550	0%	--	--
BNA	Prometryn	7287-19-6	µg/L	--	20	0%	--	--
BNA	Propachlor	1918-16-7	µg/L	--	20	0%	--	--
BNA	Thiobencarb	28249-77-6	µg/L	--	20	0%	--	--
BNA	trans-Nonachlor	39765-80-5	µg/L	--	20	0%	--	--
BNA	Trifluralin	1582-09-8	µg/L	--	20	0%	--	--

Note: The data summarized in this table includes samples collected from September 1992 through July/August 2003 during JPL's Long-term Quarterly Monitoring Program.

BNA = base neutral acid

HERB = herbicide

INORG = inorganic compound

MET = metal

PAH = polycyclic aromatic hydrocarbon

PCB = polychlorinated biphenyl

PEST = pesticide

RAD = radiation

VOC = volatile organic compound

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds(including 1,4-Dioxane)	Perchlorate
MW-1	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	--	1.9 Acetone	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	1.9 Acetone	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	1,3 m,p-Xylenes	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	0.8 Benzene ⁽⁵⁾	--
	April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--
	April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	April/May 2003	--	--	--	--	--	--	--	--	2.0 1,4-Methyl-2-Pentanone	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--
MW-3	Screen 1	Aug/Sep 1996	--	--	--	--	--	--	1.2	--	(1)
	Oct/Nov 1996	--	--	--	--	--	--	8.3	0.7(B)Naphthalene	(1)	
	Feb/Mar 1997	--	--	--	--	--	--	--	2.6 Carbon Disulfide	(1)	
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 2 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-3	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
Screen 1	April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Cont.	July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Screen 2	Jan/Feb 2002	--	--	--	--	--	--	--	--	1 Methylene Chloride	--
Cont.	April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Screen 3	Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Cont.	April/May 2003	--	--	--	--	--	--	--	--	4.0 4-Methyl-2-Pentanone	--
Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--	--
Aug/Sep 1996	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 1996	--	--	--	--	--	--	--	--	--	5.5	(1)
Feb/Mar 1997	--	--	--	--	--	--	--	--	--	4.8	(1)
Jun/Jul 1997	--	--	--	--	--	--	--	--	--	4.4	(1)
Sep/Oct 1997	--	--	--	--	--	--	--	--	--	8.0 Carbon Disulfide	(1)
Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--	--
Apr/May 1998	--	--	--	--	--	--	--	--	--	--	--
Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--	--
Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--	--
May/Jun 1999	--	--	--	--	--	--	--	--	--	--	--
Aug 1999	--	--	--	--	--	--	--	--	--	--	--
Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--	--
Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--	--
Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--	--
April 2001	--	--	--	--	--	--	--	--	--	--	--
July 2001	--	--	--	--	--	--	--	--	--	--	--
October 2001	--	--	--	--	--	--	--	0.4 J	--	--	--
Jan/Feb 2002	--	--	--	--	--	--	--	--	--	4.2 Methylene Chloride	--
April/May 2002	--	--	--	--	--	--	--	--	--	--	--
July 2002	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 2002	0.6	0.4 J	--	--	--	--	--	0.4 J	--	--	2.9 J
Jan/Feb 2003	--	--	--	--	--	--	--	--	--	--	--
April/May 2003	0.4 J	--	--	--	--	--	--	--	--	3.0 J 4-Methyl-2-Pentanone	4.2
April/May 2003	--	--	--	--	--	--	--	--	--	3.0 J 4-Methyl-2-Pentanone	5.8
Duplicate	--	--	--	--	--	--	--	--	--	--	--
July/Aug 2003	0.6	0.3 J	--	--	--	--	--	--	--	--	8.9 J
Oct/Nov 2003	0.8	0.3 J	--	--	--	--	--	--	--	--	5.6 J
Screen 3	Aug/Sep 1996	0.6	0.8	--	--	--	--	--	--	--	(1)
Oct/Nov 1996	--	--	--	--	--	--	--	0.7	--	--	(1)
Feb/Mar 1997	--	--	--	--	--	--	--	0.8	--	--	(1)

	Jun/Jul 1997	1.2	0.8	0.6	--	--	--	2.8	1.8	--
	Sep/Oct 1997	1.2	0.5	--	--	--	--	--	1.6	--
	Jan/Feb 1998	1.2	--	--	--	--	--	--	2.7	--
	Apr/May 1998	3.6	0.9	--	--	--	--	3.9	--	6.5
										6.2

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 3 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-3	Jul/Aug 1998	2.4	0.6	--	--	--	--	3.6	--	10
Screen 3	Oct/Nov 1998	5.8	0.7	--	--	--	--	21	2.7 Carbon Disulfide	--
cont.	Feb/Mar 1999	4.5	1.3	--	--	--	0.9	42	--	--
	May/Jun 1999	42	1.3	--	--	--	1.0	26(EB)	--	8.9
	Aug 1999	15	1.0	--	--	--	0.8	37	--	--
	Nov/Dec 1999	26	1.3	--	--	--	0.9	43(EB)	--	5.2
	Mar/Apr 2000	42	1.9	--	--	--	1.1	32(EB)	--	19.4
	Jul/Aug 2000	8.6	1.4	--	--	--	0.7	37(EB)	--	--
	Jan/Feb 2001	2.6	0.9	--	--	--	--	32.9	--	--
	April 2001	8.0	--	0.3 J	--	--	--	17.0	--	13
	July 2001	7.7	0.9	--	--	--	--	26.4	0.4 J Xylene	8.4
	October 2001	15.3	1.2	--	--	--	--	24.5	--	--
	Jan/Feb 2002	11.6 J	1.2	--	--	--	--	22.7	--	15.4
	April/May 2002	--	0.7	0.5	--	--	--	4.2	--	4.6
	July 2002	--	0.5 J	--	--	--	--	2.3	--	--
	Oct/Nov 2002	--	--	--	--	--	--	1.2	--	--
	Jan/Feb 2003	--	--	--	--	--	--	0.8	--	--
	April/May 2003	--	--	--	--	--	--	0.9	3.0 J 4-Methyl-2-Pentanone	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--
	Oct/Nov 2003	--	--	--	--	--	0.6	--	--	(1)
Screen 4	Aug/Sep 1996	--	--	--	--	--	--	--	1.2 Acetone	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	1.0 Hexane	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	--
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	4.7 Carbon Disulfide ⁽³⁾	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	4.1 Carbonyl Sulfide	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--
	April 2001	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	0.8 Ethylbenzene	--
	October 2001	--	--	--	--	--	--	0.3 J	6.4 Methyl tertiary butyl ether 0.3 J Toluene	--
	Jan/Feb 2002	--	--	--	--	--	--	--	10 Methylene Chloride	--
	April/May 2002	--	--	--	--	--	--	--	--	--
	July 2002	--	--	--	--	--	--	--	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 4 of 46)**

Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded
(concentrations in µg/L)

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-3 Screen 4	Oct/Nov 2002	--	--	--	--	--	--	--	5.5 Methyl-Tertiary Butyl Ether 0.5 J Toluene	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--
	April/May 2003	--	--	--	--	--	--	--	3.0 4-Methyl-2-Pentanone	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--
Screen 5	Oct/Nov 2003	--	--	--	--	--	--	--	--	--
	Aug/Sep 1996	--	--	--	--	--	--	--	2.1 Dichlortomethane (1) 2.1 Acetone	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	1.2 Carbon Disulfide 1.5 Carbon Disulfide 2.7 Sulfur Dioxide 1.3 Unknown(RT=2.51)	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	4.5 Carbon Disulfide	--
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	91
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	75
	Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	140
	Nov/Dec 1999	--	--	--	--	--	--	--	0.2 Carbonyl Sulfide	--
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Jul/Aug 2000	--	--	--	--	--	--	--	0.7 Carbonyl Sulfide	--
	Jan/Feb 2001	--	--	--	--	--	--	--	0.3 J Ethylbenzene	--
	April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	0.5 J Styrene	--
	July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Jan/Feb 2002	--	--	--	--	--	--	--	7.5 Methylene Chloride	9.3
	April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	April/May 2003	--	--	--	--	--	--	--	4.0 J 4-Methyl-2-Pentanone 0.4 J Styrene	--
	Oct/Nov 2003	--	--	--	--	--	--	--	5.0 J 2-Butanone 0.7 Ethylbenzene 1.3 Ethylbenzene 0.8 Styrene	--
	Screen 1	Aug/Sep 1996	--	--	--	--	--	--	2.9(B) Acetone	(1)
MW-4	Oct/Nov 1996	--	--	--	--	--	--	--	--	(1)

	(1)
Feb/Mar 1997	--
Jun/Jul 1997	--
Sep/Oct 1997	--
Jan/Feb 1998	--
Apr/May 1998	--
Jul/Aug 1998	--
Oct/Nov 1998	--
	3,4-Dichloromethane ⁽⁴⁾

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 5 of 46)**

(concentrations in µg/L)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-4	Feb/Mar 1999	--	--	--	--	--	--	0.8(B)	--	--	--
Screen 1	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
cont.	Aug 1999	--	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	2.0 Methylene chloride	--	--
	April 2001	--	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--
	April/May 2002	--	--	--	--	--	--	--	--	--	--
	July 2002	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2002	--	0.7	--	--	--	--	--	1.0	--	28.7
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--	--
	April/May 2003	--	--	--	--	--	--	--	--	--	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--	--
Duplicate											
Screen 2	Aug/Sep 1996	5.5	19	--	--	0.9	0.7	--	6.7	3.2(B) Acetone	(1)
	Oct/Nov 1996	5.3	15	--	--	0.6	0.8	--	5.4	1.8 Acetone	(1)
	Feb/Mar 1997	7.9	19	--	--	0.8	0.8	--	7.8	--	(1)
	Jun/Jul 1997	4.0	5.7	--	--	0.5	--	--	3.4	--	51
	Sep/Oct 1997	4.0	8.0	0.5	0.6	--	0.5	--	3.5	--	34
	Jan/Feb 1998	1.9	2.7	0.6	--	--	--	--	1.8	--	30
	Apr/May 1998	2.8	4.3	0.7	0.5	--	--	--	3.1	--	41
	Jul/Aug 1998	1.5	3.0	0.8	0.5	--	--	--	2.0	--	29
	Oct/Nov 1998	0.9	2.4	0.7	--	0.5	--	--	1.6	--	25
	Feb/Mar 1999	1.2	4.1	0.6	0.5 ⁽⁵⁾	--	--	--	2.5	--	38
	May/Jun 1999	2.0	6.4	0.7	--	--	--	--	3.7(EB)	--	56
	Aug 1999	1.9	5.5	0.5	--	--	--	--	3.3	--	69
	Nov/Dec 1999	2.3	6.2	0.7	--	--	--	--	3.1(EB)	--	42
	Mar/Apr 2000	1.4	3.9	0.7	--	--	--	--	1.7(EB)	--	33
	Jul/Aug 2000	1.7	3.8	1.0	0.6	--	--	--	1.9(EB)	--	32
	Jan/Feb 2001	--	0.7 J	--	--	--	--	--	1.0 Methylene chloride	--	7.0
	April 2001	0.3 J	--	1.1	0.5 J	--	--	--	--	--	13
	July 2001	0.7	1.6	1.1	0.5	--	--	--	1.0	--	20
	October 2001	0.6	1.8	0.9	0.5	--	--	--	0.9	--	27 J
	Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--
	April/May 2002	--	1.3	1.0	0.7	--	--	--	0.5	--	--
	July 2002	--	0.8	1.6	0.7	--	--	--	--	--	--
	Oct/Nov 2002	--	1.7 ⁽⁵⁾	0.8 ⁽⁵⁾	0.6 ⁽⁵⁾	--	--	--	0.4 J	--	--

Jan/Feb 2003	--	1.2	0.7	0.5 J	--	--	0.5 J	--
April/May 2003	--	0.4 J	0.7	--	--	--	--	6.6
July/Aug 2003	--	0.7	1.3	0.6	--	--	0.5 J	--
Oct/Nov 2003	--	0.6	1.0	0.4 J	--	--	--	4.3 J

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
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(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-4	Aug/Sep 1996	--	--	--	--	--	--	--	--	3.0(B) Acetone	(1)
Screen 3	Oct/Nov 1996	--	--	--	--	--	--	--	--	1.5 Acetone	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	1.0 Dichloromethane ⁽⁴⁾	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	0.7 ⁽⁴⁾	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	0.6 Unknown (RT=4.79)	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	1.0 Methylene chloride	--
	April 2001	--	--	--	--	--	--	--	--	1.0 Ethylbenzene	--
	July 2001	--	--	--	--	--	--	--	--	0.6 Ethylbenzene	--
	October 2001	--	--	--	--	--	--	--	--	1.8 Ethylbenzene	--
	Jan/Feb 2002	--	--	--	--	--	--	--	--	0.9 Ethylbenzene	--
	April/May 2002	--	--	--	--	--	--	--	--	1.4 Ethylbenzene ⁽⁵⁾	--
	July 2002	--	--	--	--	--	--	--	--	1.7 Ethylbenzene	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	1.6 Ethylbenzene	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	2.1 Ethylbenzene	--
	April/May 2003	--	--	--	--	--	--	--	--	0.4 J Styrene	--
	July/Aug 2003	--	--	--	--	--	--	--	--	0.3 J Toluene	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	2.3 Ethylbenzene	--
	Aug/Sep 1996	--	--	--	--	--	--	--	--	0.4 J Toluene	--
Screen 4	Oct/Nov 1996	--	--	--	--	--	--	--	--	1.8 Chloromethane	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	0.3 J Toluene	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	--	1.9 Ethylbenzene	(1)
	Sep/Oct 1997	--	--	--	--	--	--	--	--	4.5 Ethylbenzene	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	0.5 J Styrene	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	0.6 Toluene	--
	Jun/Jul 1999	--	--	--	--	--	--	--	--	0.5 Toluene	--
	Sep/Oct 1999	--	--	--	--	--	--	--	--	3.9(B) Acetone	--
	Oct/Nov 2000	--	--	--	--	--	--	--	--	1.6 Acetone	--
	Feb/Mar 2001	--	--	--	--	--	--	--	--	--	--
	Jun/Jul 2001	--	--	--	--	--	--	--	--	--	--
	Sep/Oct 2001	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 2002	--	--	--	--	--	--	--	--	--	--
	Jun/Jul 2002	--	--	--	--	--	--	--	--	--	--
	Sep/Oct 2002	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 2003	--	--	--	--	--	--	--	--	--	--
	Jun/Jul 2003	--	--	--	--	--	--	--	--	--	--
	Sep/Oct 2003	--	--	--	--	--	--	--	--	--	--

Jan/Feb 1998	--	--	--	--	--	--	--
Apr/May 1998	--	--	--	--	--	--	--
Jul/Aug 1998	--	--	--	--	--	--	--
Oct/Nov 1998	--	--	--	--	--	--	--
Feb/Mar 1999	--	--	--	--	0.6 ⁽⁴⁾	--	--
May/Jun 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 7 of 46)**

Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-4	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
Screen 4 cont.	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 2001	--	--	--	--	--	--	--	--	2.0 J Methylene chloride	--	--
April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--	--
April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
April/May 2003	--	--	--	--	--	--	--	--	--	--	--
April/May 2003 Duplicate	--	--	--	--	--	--	--	--	3.0 4-Methyl-2-Pentanone 2.0 Chloroethane 0.4 J Chloromethane	--	--
Screen 5	Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--
Oct/Nov 1996	--	--	--	--	--	--	--	--	1.9 Acetone	(1)	(1)
Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)	(1)
Feb/Mar 1997	--	--	--	--	--	--	--	--	--	--	--
Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--	--
Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 1998	--	--	--	--	--	--	--	--	7.4 Hexane	--	--
Apr/May 1998	--	--	--	--	--	--	--	--	--	--	--
Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--	--
Feb/Mar 1999	--	--	--	--	--	--	0.6(4)	--	--	--	--
May/Jun 1999	--	--	--	--	--	--	--	--	--	--	--
Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--	--
Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 2001	--	--	--	--	--	--	--	--	1.0 Methylene chloride 3.8 Methyl tertiary butyl ether	--	--
April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--	--
April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
April/May 2003	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--	--

	Oct/Nov 2003	--	--	--	--	--	--	2.0 J 4-Methyl-2-Pentanone	--
Duplicate									
MW-5	Aug/Sep 1996	--	--	--	--	--	--	(1)	
	Oct/Nov 1996	--	--	--	--	--	--	(1)	
	Feb/Mar 1997	--	--	--	--	--	--	(1)	
	Jun/Jul 1997	--	--	--	--	--	--	--	
	Sep/Oct 1997	--	--	--	--	--	--	--	

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
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(concentrations in µg/L)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-5	Jan/Feb 1998	--	--	--	--	--	--	--	--	4.2
cont.	Apr/May 1998	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	6.5 Dichloromethane ⁽⁴⁾	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	4.5	--	--	--	--	0.5 J	--	2.1	--
	April 2001	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	4.2	--	--	--	--	--	--	2.3,4	--
	April/May 2002	0.9	6.2	--	--	--	--	0.8	--	2.2,2
	July 2002	--	0.6	--	--	--	--	--	--	4.1
	Oct/Nov 2002	1.1	18.9	0.8	0.4J	--	--	2.0	--	22.7
	Jan/Feb 2003	1.6	14.9	0.7	--	--	--	1.4	--	25.2
	April/May 2003	--	--	--	--	--	--	--	5.0 J 4-Methyl-2-Pentanone	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--
MW-6	Aug/Sep 1996	--	--	--	--	--	--	1.3(TB)	--	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	--	(1)
	Feb/Mar 1997	--	--	0.8	--	--	--	--	--	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	5.5	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	2.0	1.0	--	--	--	--	--	--
	Apr/May 1998	0.7	3.2	1.1	--	--	0.6	--	7.6 Dichloromethane ⁽⁴⁾	4.2
	Jul/Aug 1998	0.6	2.5	0.8	--	--	--	--	--	--
	Oct/Nov 1998	--	0.7	--	--	--	--	--	--	--
	Feb/Mar 1999	0.8	3.8	1.0	--	--	0.6	--	--	--
	May/Jun 1999	--	1.5	--	--	--	--	--	--	--
	Aug 1999	--	0.5	--	--	--	--	--	4.0	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	3.0	0.8	--	--	--	--	4.8	--
	Jul/Aug 2000	--	--	--	--	--	--	--	4.1	--
	Jan/Feb 2001	--	3.0	1.1	--	--	0.5 J	0.4 J Methylene Chloride	1.0 J Methyl tertiary butyl ether	--
	April 2001	--	0.3 J	2.1	1.0	--	--	0.6(5)	--	--
	July 2001	--	1.4	0.4 J	--	--	0.4 J	0.3 J Trichlorofluoromethane	--	--
	October 2001	--	1.6	0.7	--	--	--	--	--	3.2 J
	Jan/Feb 2002	0.4 J	4.6	1.3	--	0.7	--	0.9	--	--

April/May 2002 -- -- 5.0 1.3 -- 0.9 -- -- 0.7 -- -- 6.4

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
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(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-6	July 2002	--	--	1.1	0.5 J	--	--	--	--	--	--
cont.	Oct/Nov 2002	--	0.3 J	3.1	1.2	--	0.7	--	0.7	1.7 trans-1,2-Dichloroethene 2.0 Methyl-Tertiary Butyl Ether	--
										1.5 Trichlorofluoromethane	
	Jan/Feb 2003	--	--	2.6	0.8	--	0.7	--	0.4J	--	3.8J
	April/May 2003	--	--	3.0	0.9	--	0.7	--	0.5J	4-Methyl-1,2-Pentanone	2.3J
	July/Aug 2003	--	--	2.3	0.7	--	--	--	0.3J	--	2.9J
	Oct/Nov 2003	--	--	3.0	0.9	--	0.8	--	0.3J	--	3.6J
MW-7	Aug/Sep 1996	90	39	0.8	--	1.2	1.1	7.2	13(TB)	--	(1)
	Oct/Nov 1996	170	27	1.3	--	0.8	2.3	7.7	14	4.3(B) 1,1-Difluoroethane	(1)
										2.8(B) Acetone	
	Feb/Mar 1997	45	27	0.6	--	0.8	0.9	5.1	9.9	--	(1)
	Jun/Jul 1997	39	23	0.7	--	0.8	1.0	4.1	11	10 Unknown	285
	Sep/Oct 1997	93	22	1.1	--	0.9	1.3	4.7	13	--	550
	Jan/Feb 1998	150	24	3.7	--	0.8	2.1	6.4	13	--	720
	Apr/May 1998	31	13	0.5	--	--	--	3.1	6.1	--	130
	Jul/Aug 1998	43	19	0.8	--	0.6	0.9	3.4	9dL0	1.0 Dichloromethane ⁽⁴⁾	190
	Oct/Nov 1998	51	18	0.9	--	0.7	1.1	3.0	9.8	3.4 Carbon Disulfide	210
	Feb/Mar 1999	49	17	0.6	--	--	0.9	2.0	7.2	--	150
	May/Jun 1999	42	14	--	--	--	--	2.2	5.7(FB)	--	120
	Aug 1999	40	16	0.5	--	--	0.8	1.9	7.8(FB)	--	210
	Nov/Dec 1999	120	19.7	3.0	--	0.7	2.2	2.4	10.8(FB)	--	460
	Mar/Apr 2000	110	18	2.7	--	0.5	2.3	2.6	8.9(FB)	--	740
	Jul/Aug 2000	50	14	1.2	--	--	0.9	2.0	7.1(FB)	--	290
	Jan/Feb 2001	NOT SAMPLED – PILOT TEST									1,100*
	April 2001	NOT SAMPLED – PILOT TEST									420*
	July 2001	NOT SAMPLED – PILOT TEST									
	October 2001	NOT SAMPLED – PILOT TEST									
	Jan/Feb 2002	135	15.4	17.1	--	--	6.0	6.0	13.3	0.4 J Trichlorofluoromethane 5 1,4-Dioxane	4,090
	April/May 2002	208	16.9	30.4	--	--	11.4	9.2	20.7	0.4 J Trichlorofluoromethane	6,770
	July 2002	70.7	6.3	7.6	--	--	3.1	1.6	6.8	--	2,590
	Oct/Nov 2002	150.0	8.9	32.8	--	--	12.4	8.0	20.9	1.5 Trichlorofluoromethane	13,300
	Jan/Feb 2003	102.0	4.4	11.8	--	--	6.1	4.2	12.9	--	5,200
	Jan/Feb 2003	122.0	4.8	13.5	--	--	6.4	4.2	12.3	--	6,190
	Duplicate										
	April/May 2003	73.7	8.1	9.9	--	--	4.2	3.6	10.0	6.0 J 4-Methyl-2-Pentanone 2.3 Methylen Chloride	5560
	July/Aug 2003	40.4	4.5	4.9	--	--	2.2	2.2	6.8	--	1920 J
	Oct/Nov 2003	42.0	5.0	7.2	--	--	3.2	2.4	9.9	--	2400 J
MW-8	Aug/Sep 1996	4.0	4.6	--	--	--	--	--	1.3	--	(1)
	Oct/Nov 1996	2.8	2.2	--	--	--	--	0.6	0.6	1.7 Acetone	(1)

	Feb/Mar 1997	1.5	4.5	--	--	--	--	--	1.3	1.1 Freon 11 1.9 Carbon Disulfide	(1)
Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--	6.4
Sep/Oct 1997	3.2	3.6	3.6	--	--	--	--	--	1.2	1.0 Freon 11	29
Jan/Feb 1998	1.8	1.3	1.3	--	--	--	--	--	0.8	0.8 Freon 11	11
Apr/May 1998	1.3	1.3	1.3	--	--	--	--	--	0.5	--	7.6
Jul/Aug 1998	--	--	--	--	--	--	--	--	--	6.6 Dichloromethane ⁽⁴⁾	--
Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 10 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-8	Feb/Mar 1999	--	--	--	--	--	--	--	--	--
cont.	May/Jun 1999	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	0.9	0.8	--	--	--	--	--	--	5.2
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	10
	Jan/Feb 2001	1.1	0.9	--	--	--	--	0.4 J	0.5 J Methyl tertiary butyl ether 1.0 Trichlorofluoromethane	5.0
	April 2001	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	13
	October 2001	--	--	--	--	--	--	--	--	17.9 J
	Jan/Feb 2002	2.2	1.8	--	--	--	0.6	0.8	0.4 J Trichlorofluoromethane	20.1
	April/May 2002	0.5	0.4 J	--	--	--	--	--	0.4 J Trichlorofluoromethane	--
	July 2002	0.7	--	0.3 J	--	--	--	--	--	21.7
	Oct/Nov 2002	12.3	7.1	--	--	--	1.7	2.9	1.6 Trichlorofluoromethane	127.0
	Jan/Feb 2003	4.3	2.6	--	--	--	1.1	--	--	45.0
	April/May 2003	--	--	--	--	--	--	--	5.0 J 4-Methyl-2-Pentanone	4.2
	July/Aug 2003	--	--	--	--	--	--	--	--	9.7 J
	Oct/Nov 2003	--	--	--	--	--	--	--	--	20.2 J
	Oct/Nov 2003	--	--	--	--	--	--	--	--	20.2 J
Duplicate		--	--	--	--	--	--	--	--	--
MW-9	Aug/Sep 1996	--	--	--	--	--	--	--	--	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	--	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	3.9 Unknown RT=6.21	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--
	Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--
	April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jan/Feb 2002	--	--	--	--	--	--	--	--	--
	April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)
April/May 2003	--	--	--	--	--	--	--
Oct/Nov 2003	--	--	--	--	--	--	--
							3.0 J

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 11 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-10	Aug/Sep 1996	0.7	1.8	0.5	--	--	--	1.2	1.4(TB)	--	(1)
	Oct/Nov 1996	0.6	6.6	1.0	1.9	--	--	0.8	1.1	3.0(B) Acetone	(1)
	Feb/Mar 1997	5.2	--	--	--	--	--	--	0.6	--	(1)
	Jun/Jul 1997	--	2.2	--	--	--	--	--	--	--	11
	Sep/Oct 1997	--	4.3	1.3	1.2	--	--	--	1.0	--	16
	Jan/Feb 1998	--	1.1	2.2	1.6	--	--	--	1.4	--	4.7
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	8.2 Dichloromethane ⁽⁴⁾	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	5.7	--	--	--	--	--	0.9	--	39
	May/Jun 1999	--	1.1	--	--	--	--	--	--	--	10
	Aug 1999	--	2.2	--	--	--	--	--	--	--	21
	Nov/Dec 1999	--	3.7	1.1	0.6	--	--	--	0.9	--	21
	Mar/Apr 2000	--	2.0	2.2	1.1	--	--	--	0.9	--	9.1
	Jul/Aug 2000	--	1.1	--	--	--	--	--	--	--	15
	Jan/Feb 2001	--	0.6	1.6	0.9	--	--	--	1.0	--	5.0
	April 2001	0.6	20.2	--	0.4 J	--	--	--	1.9	--	39 ⁽⁵⁾
	July 2001	0.4 J	12.6⁽⁵⁾	0.4 J	--	--	--	--	0.9 ⁽⁵⁾	--	30 ⁽⁵⁾
	October 2001	--	5.8	0.5	0.5 J ⁽⁵⁾	--	--	--	0.7 ⁽⁵⁾	--	13 J
	Jan/Feb 2002	--	3.0	2.9	0.9	--	--	--	--	--	13 J
	April/May 2002	--	3.6	1.7	0.6	--	--	--	0.7	--	--
	July 2002	--	8.4	1.2	0.9	--	--	--	1.0	0.5 J Methylene Chloride	13.0
	Oct/Nov 2002	--	4.2	1.6	0.7	--	--	--	0.8	--	--
	Jan/Feb 2003	--	2.5	1.3	0.5 J	--	--	--	--	--	3.5 J
	April/May 2003	0.2 J	11.2	1.3	0.8	--	--	--	1.1	6.0 J 4-Methyl-2-Pentanone	17.5
	July/Aug 2003	0.3 J	12.3	0.9	0.6	--	--	--	1.3	--	43.6
	Oct/Nov 2003	--	10.8	1.5	0.9	--	--	--	1.2	--	21.9 J
MW-11	Screen 1	Aug/Sep 1996	--	--	--	--	--	--	--	2.6(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	--	7.1 Methyl tertiary butyl ether 1.8 Acetone	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
	Jun/Jul 1997	1.4	--	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	1.5	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	1.4	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	0.9 ⁽⁴⁾	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 12 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-11	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
Screen 1	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
cont.	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	0.4 J	--	0.5 1,3-Dichloropropane	--
	April 2001	0.4 J	--	--	--	--	--	--	--	--	--
	July 2001	1.2	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	0.4 J	--	--	--	--	--	--	--	--	--
	April/May 2002	--	--	--	--	--	--	--	--	--	--
	July 2002	--	--	--	--	--	--	0.7	--	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--	2.4 J
	April/May 2003	--	--	--	--	--	--	--	--	6.0 J 4-Methyl-2-Pentanone	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--
Screen 2	Aug/Sep 1996	2.4	--	--	--	--	--	--	1.0	--	(1)
	Oct/Nov 1996	1.1	--	--	--	--	--	--	1.2	--	(1)
	Feb/Mar 1997	1.7	--	--	--	--	--	--	1.0	--	(1)
	Jun/Jul 1997	1.2	--	--	--	--	--	--	1.0	--	--
	Sep/Oct 1997	0.6	--	--	--	--	--	--	0.6	--	--
	Jan/Feb 1998	0.7	--	--	--	--	--	--	0.7	--	--
	Apr/May 1998	1.0	--	--	--	--	--	--	0.7	--	--
	Jul/Aug 1998	0.9	--	--	--	--	--	--	0.6	--	--
	Oct/Nov 1998	0.6	--	--	--	--	--	--	0.7	--	--
	Feb/Mar 1999	--	--	--	--	--	--	0.7 ⁽⁴⁾	1.1	--	--
	May/Jun 1999	0.5	--	--	--	--	--	--	0.7(EB)	--	--
	Aug 1999	0.5	--	--	--	--	--	--	0.6	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	0.5(EB)	--	--
	Mar/Apr 2000	0.8	--	--	--	--	--	--	0.7(EB)	--	--
	Jul/Aug 2000	0.7	--	--	--	--	--	--	0.5(EB)	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	0.7	--	--
	April 2001	0.4 J	--	--	--	--	--	--	0.6	0.6 1,3-Dichloropropane	--
	July 2001	0.7	0.4 J	--	--	--	--	--	0.5	--	--
	October 2001	--	--	--	--	--	--	--	0.5 J	--	--
	Jan/Feb 2002	0.5	--	--	--	--	--	--	0.9	--	--
	April/May 2002	--	--	--	--	--	--	--	1	--	--
	July 2002	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	0.5	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	0.5 J	--	3.6 J
	April/May 2003	--	--	--	--	--	--	--	6.0 J 4-Methyl-2-Pentanone	--	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2003	--	--	--	--	--	--	--	1.3	2.9(B) Acetone	(1)
Screen 3	Aug/Sep 1996	0.9	--	--	--	--	--	--	--	--	--

Oct/Nov 1996	--	--	--	--	--	(1)
Feb/Mar 1997	--	--	--	--	--	(1)
Jun/Jul 1997	0.7	--	--	--	--	--
Sep/Oct 1997	0.6	--	--	--	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 13 of 46)**

(concentrations in $\mu\text{g/L}$)
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Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-11	Jan/Feb 1998	--	--	--	--	--	--	--	1.4	--	--
Screen 3 cont.	Apr/May 1998	1.0	--	--	--	--	--	--	1.3	--	--
	Jul/Aug 1998	1.5	--	--	--	--	--	--	1.4	--	--
	Oct/Nov 1998	1.3	--	--	--	--	--	--	1.1	--	--
	Feb/Mar 1999	--	--	--	--	--	0.7 ⁽⁴⁾	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	0.7	--	--	--	--	--	--	0.7	--	--
	Nov/Dec 1999	0.9	--	--	--	--	--	--	0.7(EB)	--	--
	Jul/Aug 2000	0.9	--	--	--	--	--	--	0.6(EB)	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
	April 2001	--	--	--	--	--	--	--	--	--	--
	July 2001	0.4 J	--	--	--	--	--	--	0.5	--	--
	October 2001	0.7	--	--	--	--	--	--	0.5 J	--	--
	Jan/Feb 2002	0.7	--	--	--	--	--	--	--	--	--
	April/May 2002	--	--	--	--	--	--	--	--	--	--
	July 2002	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	3.1 J	--
	April/May 2003	--	--	--	--	--	--	--	6.0 J	4-Methyl-2-Pentanone	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2003	--	--	--	--	--	--	--	2.0 J	4-Methyl-2-Pentanone 1,4 Chlorothiane 0.4 J Chloromethane	--
Screen 4	Aug/Sep 1996	--	--	--	--	--	--	0.5	2.4(B) Acetone	(1)	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	--	(1)	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	1.5 2-Methyl-1-Propene	(1)	
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--	
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	
	Jan/Feb 1998	--	--	--	--	--	--	0.5	--	--	
	Apr/May 1998	--	--	--	--	--	--	0.5	--	--	
	Jul/Aug 1998	--	--	--	--	--	--	0.5	--	--	
	Oct/Nov 1998	--	--	--	--	--	--	0.6	--	--	
	Feb/Mar 1999	--	--	--	--	--	0.7 ⁽⁴⁾	--	--	--	
	May/Jun 1999	--	--	--	--	--	--	0.5(EB)	--	--	
	Aug 1999	--	--	--	--	--	--	0.5	--	(2)	
	Nov/Dec 1999	--	--	--	--	--	--	0.5(EB)	--	--	
	Mar/Apr 2000	--	--	--	--	--	--	0.6(EB)	--	(2)	
	Jul/Aug 2000	--	--	--	--	--	--	0.6(EB)	--	--	
	Jan/Feb 2001	--	--	--	--	--	--	0.3 J	0.6 Methylene Chloride	--	
	April 2001	--	--	--	--	--	--	--	--	--	
	July 2001	--	--	--	--	--	--	0.6	--	--	
	October 2001	--	--	--	--	--	--	--	--	--	
	Jan/Feb 2002	0.5 J	--	--	--	--	--	--	--	--	

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
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(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-11	July 2002	--	--	--	--	--	--	--	--	--	--
Screen 4 cont.	Oct/Nov 2002	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	4.8	
	April/May 2003	--	--	--	--	--	--	--	7.0 J 4-Methyl-2-Pentanone	--	
	July/Aug 2003	--	--	--	--	--	--	--	0.31 J 4-Methyl-2-Pentanone	--	
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--	
Screen 5	Aug/Sep 1996	--	--	--	--	--	--	--	2.4(B) Acetone	(1)	
	Oct/Nov 1996	--	--	--	--	--	--	--	1.1 Acetone	(1)	
	Feb/Mar 1997	--	--	--	--	--	--	--	--	(1)	
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--	
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	
	Apr/May 1998	--	--	--	--	--	--	--	44 Carbon Disulfide ⁽³⁾	--	
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	
	Feb/Mar 1999	--	--	--	--	--	0.7 ⁽⁴⁾	--	--	--	
	May/Jun 1999	--	--	--	--	--	--	--	--	--	
	Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
	April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jan/Feb 2002	0.5 J	--	--	--	--	--	--	--	--	--
	April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	April/May 2003	--	--	--	--	--	--	--	7.0 J 4-Methyl-2-Pentanone	--	
	July/Aug 2003	--	--	--	--	--	--	--	--	--	
	Oct/Nov 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
MW-12	Aug/Sep 1996	--	--	--	--	--	--	--	4.1	--	(1)
Screen 1	Oct/Nov 1996	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
	Feb/Mar 1997	--	--	--	--	--	--	--	5.8	--	(1)
	Jun/Jul 1997	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
	Sep/Oct 1997	--	--	--	--	--	--	--	0.5	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	0.8	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--

Oct/Nov 1998 -- -- -- -- --
Feb/Mar 1999 -- -- -- -- --
May/Jun 1999 -- -- -- -- --

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 15 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-12	Aug 1999	--	--	--	--	--	--	--	--	--	--
Screen 1	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
cont.	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
	April 2001	--	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--
	April/May 2002	--	--	--	--	--	--	--	--	--	--
	July 2002	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	0.6 1,3-Dichloropropane 8.0 4-Methyl-2-Pentanone	2.9 J
	April/May 2003	--	--	--	--	--	--	--	--	--	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--
Screen 2	Aug/Sep 1996	0.9	--	--	--	--	--	--	--	--	(1)
	Oct/Nov 1996	1.5	0.6	--	--	--	0.5	--	--	--	(1)
	Feb/Mar 1997	1.1	0.5	--	--	--	--	--	0.8	--	(1)
	Jun/Jul 1997	1.0	--	--	--	--	--	--	0.8	--	6.9
	Sep/Oct 1997	0.8	--	--	--	--	--	--	0.8	--	5.8
	Jan/Feb 1998	1.1	--	--	--	--	--	--	0.6	--	6.3
	Apr/May 1998	1.2	--	--	--	--	--	--	0.9	--	6.0
	Jul/Aug 1998	1.4	--	--	--	--	--	--	0.9	--	5.1
	Oct/Nov 1998	1.3	--	--	--	--	--	--	1.0	--	4.2
	Feb/Mar 1999	1.3	--	--	--	--	--	--	0.9	--	4.1
	May/Jun 1999	0.8	--	--	--	--	--	--	0.6(EB)	0.8 Dichloromethane(EB)	5.0
	Aug 1999	0.5	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	0.5	--	--	--	--	--	--	--	0.5 Unknown (RT=4.79)	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
	April 2001	0.3 J	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	0.5⁽⁵⁾	--	--	--	--	--	--	--	--
	April/May 2002	0.4 J	--	--	--	--	--	--	--	--	--
	July 2002	0.41	--	--	--	--	--	--	--	--	--
	Oct/Nov 2002	0.8	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	0.5 J	--	--	--	--	--	--	--	0.5 1,3-Dichloropropane	2.2 J
	Jan/Feb 2003	0.6	--	--	--	--	--	--	--	0.6 1,3-Dichloropropane	--
	Duplicate	--	--	--	--	--	--	--	--	--	--
	April/May 2003	--	--	--	--	--	--	--	--	5.0 J 4-Methyl-2-Pentanone	--

	July/Aug 2003	0.3J	--	--	--	--	--	--	--	--	3.4J
	Oct/Nov 2003	0.4J	--	--	--	--	--	--	--	--	--
Screen 3	Aug/Sep 1996	4.5	--	--	--	--	--	--	--	--	(1)
	Oct/Nov 1996	3.8	--	--	--	--	--	--	--	--	(1)
	Feb/Mar 1997	6.4	--	--	--	--	--	--	--	--	(1)
	Jun/Jul 1997	20	--	--	--	--	--	--	--	--	5.7

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 16 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-13	Sep/Oct 1997	14	--	--	--	--	--	--	1.7	--	6.2
Screen 3	Jan/Feb 1998	23 E	--	--	--	--	--	--	2.3	--	5.9
cont.	Apr/May 1998	25	--	--	--	--	--	--	2.0	--	6.9
	Jul/Aug 1998	35	--	--	--	--	--	--	2.2	--	6.6
	Oct/Nov 1998	27	--	--	--	--	--	--	2.2	--	6.9
	Feb/Mar 1999	23	--	--	--	--	--	--	--	--	6.9
	May/Jun 1999	19	--	--	--	--	--	--	2.0(EB)	--	8.7
	Aug 1999	19	--	--	--	--	--	--	2.3	--	--
	Nov/Dec 1999	23	--	--	--	--	--	--	2.4(EB)	0.5 Unknown	8.5
	Mar/Apr 2000	17	--	--	--	--	--	--	1.9(EB)	--	8.2
	Jul/Aug 2000	16	--	--	--	--	--	--	1.9(EB)	--	6.9
	Jan/Feb 2001	20 J	--	--	--	--	--	--	--	--	--
	April 2001	10.2	--	--	--	--	--	--	2.1	--	4.0
	July 2001	10.6	--	--	--	--	--	--	1.5	--	--
	October 2001	5.4	--	--	--	--	--	--	1.1	--	6.2
	Jan/Feb 2002	4.0	0.5	--	--	--	--	--	1.3	--	--
	April/May 2002	4.6	0.3 J	--	--	--	--	--	2.3	--	--
	July 2002	1.2⁽⁶⁾	--	--	--	--	--	--	3.9 ⁽⁵⁾	--	--
	Oct/Nov 2002	2.4	--	--	--	--	--	--	2.2	--	--
	Jan/Feb 2003	4.9	--	--	--	--	--	--	2.2	--	--
	April/May 2003	2.5	--	--	--	--	--	--	1.1	--	1.8 J
	April/May 2003 Duplicate	2.6	--	--	--	--	--	--	1.2	4.0 J 4-Methyl-2-Pentanone	2.8 J
	July/Aug 2003	5.1	--	--	--	--	--	--	1.7	--	3.4 J
	Oct/Nov 2003	2.2	--	--	--	--	--	--	2.3	--	2.8 J
Screen 4	Aug/Sep 1996	6.3	--	--	--	--	--	--	1.4	--	(1)
	Oct/Nov 1996	5.1	--	--	--	--	--	--	1.4	2.5 Acetone	(1)
	Feb/Mar 1997	4.9	--	--	--	--	--	--	1.3	--	(1)
	Jun/Jul 1997	4.9	--	--	--	--	--	--	1.3	--	7.3
	Sep/Oct 1997	3.8	--	--	--	--	--	--	1.0	--	7.6
	Jan/Feb 1998	4.0	--	--	--	--	--	--	1.1	--	8.0
	Apr/May 1998	4.3	--	--	--	--	--	--	1.2	--	8.0
	Jul/Aug 1998	5.1	--	--	--	--	--	--	1.2	--	--
	Oct/Nov 1998	4.1	--	--	--	--	--	--	1.2	--	7.7
	Feb/Mar 1999	4.5	--	--	--	--	--	--	1.2	--	7.0
	May/Jun 1999	4.0	--	--	--	--	--	--	1.0(EB) ⁽³⁾	--	9.1
	Aug 1999	3.7	--	--	--	--	--	--	1.1	--	9.2
	Nov/Dec 1999	3.9	--	--	--	--	--	--	1.3(EB)	0.5 Unknown (RT=4.8)	8.5
	Mar/Apr 2000	5.3	0.5	--	--	--	--	--	1.3(EB)	--	8.7
	Jul/Aug 2000	4.1	--	--	--	--	--	--	1.2(EB)	--	8.1
	Jan/Feb 2001	3.0	--	--	--	--	--	--	--	--	6.0
	April 2001	4.2	0.6	--	--	--	--	--	1.5	--	6.0
	July 2001	3.5	0.4 J	--	--	--	--	--	1.0	--	--

October 2001	2.7	--	--	--	--	--	--
Jan/Feb 2002	3.2	0.8	--	--	--	1	--
April/May 2002	3.5	0.6	--	--	--	1.2	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 17 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-13	July 2002	2.7	0.6	--	--	--	--	--	0.9	--	--
Screen 4	Oct/Nov 2002	1.6	--	--	--	--	--	--	0.7	--	--
cont.	Jan/Feb 2003	2.3	0.4 J	--	--	--	--	--	0.8	--	1.9 J
	April/May 2003	1.5	0.3 J	--	--	--	--	--	0.7	--	3.6 J
	July/Aug 2003	1.6	0.4 J	--	--	--	--	--	0.6	--	5.6
	Oct/Nov 2003	1.6	--	--	--	--	--	--	0.6	--	3.8 J
Screen 5	Aug/Sep 1996	3.4	--	--	--	--	--	--	0.7	--	(1)
	Oct/Nov 1996	1.3	--	--	--	--	--	--	--	1.5 Acetone	(1)
	Feb/Mar 1997	1.7	--	--	--	--	--	--	0.5	--	(1)
	Jun/Jul 1997	1.9	--	--	--	--	--	--	0.5	--	4.1
	Sep/Oct 1997	1.3	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	1.3	--	--	--	--	--	--	--	--	--
	Apr/May 1998	1.7	--	--	--	--	--	--	0.6	--	--
	Jul/Aug 1998	2.1	--	--	--	--	--	--	0.6	--	--
	Oct/Nov 1998	2.0	--	--	--	--	--	--	0.6	--	--
	Feb/Mar 1999	1.3	--	--	--	--	--	--	0.7	--	--
	May/Jun 1999	1.6	--	--	--	--	--	--	0.5(EB)	--	--
	Aug 1999	1.9	--	--	--	--	--	--	0.6	--	--
	Nov/Dec 1999	1.4	--	--	--	--	--	--	0.5(EB)	--	--
	Mar/Apr 2000	2.0	--	--	--	--	--	--	0.6(EB)	--	4.7
	Jul/Aug 2000	1.4	--	--	--	--	--	--	0.5(EB)	--	4.0
	Jan/Feb 2001	1.0⁽⁵⁾	--	--	--	--	--	--	--	--	--
	April 2001	2.0	0.9	--	--	--	--	--	0.8	--	--
	July 2001	1.4	--	--	--	--	--	--	0.4 J	--	--
	October 2001	1.1	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	0.8	0.6	--	--	--	--	--	--	--	--
	April/May 2002	0.8	--	--	--	--	--	--	0.3 J	--	--
	July 2002	0.7	--	--	--	--	--	--	--	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--	2.0 J
	April/May 2003	0.6	--	--	--	--	--	--	--	7.0 J 4-Methyl-2-Pentanone	2.2 J
	July/Aug 2003	0.9	--	--	--	--	--	--	--	--	1.9 J
	Oct/Nov 2003	0.4 J	--	--	--	--	--	--	--	--	--
MW-13	Aug/Sep 1996	21	47	0.6	--	2.5	1.5	0.7	2(TB)	--	(1)
	Oct/Nov 1996	27	27	--	--	1.9	1.5	0.6	14	--	(1)
	Feb/Mar 1997	18	28	--	--	0.9	1.1	0.6	9.2	--	(1)
	Jun/Jul 1997	6.4	24 E	--	--	0.9	0.5	--	11	--	130
	Sep/Oct 1997	8.2	19	--	--	1.1	0.5	--	10	--	210
	Jan/Feb 1998	12	5.2	0.5	--	--	0.5 ⁽⁵⁾	--	2.9	1.8 Freon 11	99
	Apr/May 1998	13	17	0.6	--	--	0.9	0.6	5.7	--	100
	Jul/Aug 1998	15	29	0.6	--	--	1.2	0.7	7.7	1.0 Dichloromethane ⁽⁴⁾	59
	Oct/Nov 1998	9.0	20	--	--	--	1.1	0.5	9.3	--	86

Feb/Mar 1999	9.4	28	--	--	0.7	0.7	11	--	--	98
May/Jun 1999	9.8	40	0.6	--	0.5	0.8	1.0	9.4	--	120
Aug 1999	11	29	--	--	0.7	0.9	--	1.2	--	150
Nov/Dec 1999	10.7	20	--	--	0.5	0.7	--	9.2	--	590

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 18 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride							Other Volatile Organic Compounds (including 1,4-Dioxane)			Perchlorate
		PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Chloroform	Chloroform	Chloroform	Chloroform	
MW-13	Mar/Apr 2000	8.9	11	0.7	0.7	0.6	--	5.2	--	--	--	330
cont.	Jul/Aug 2000	8.8	20	--	--	0.6	0.7	8.8	--	--	--	420
	Jan/Feb 2001	7.2	5.4	0.6	1.0	--	0.5 J	--	3.4	1.94 1,4-Dioxane	--	--
	April 2001	3.6	18.0	--	--	--	--	--	--	0.5 Bromodichloromethane	170	--
	July 2001	2.4	30.3	0.7	--	--	--	--	3.8	0.6 Bromodichloromethane	216	--
	October 2001	3.5	15.4	--	--	--	--	--	2.8	--	--	471 J
	Jan/Feb 2002	11.0	12.5	1.2	0.7	--	1.0	--	4.6	0.8 Trichlorofluoromethane	326	--
	April/May 2002	6.2	4.3	1.4	0.8	--	0.9	--	2.6	0.8 Trichlorofluoromethane	189	--
	July 2002	1.3⁽⁵⁾	2.1	--	--	--	--	0.8 ⁽⁵⁾	--	--	--	206
	Oct/Nov 2002	2.3	2.5	0.8	0.7	--	0.4 J	--	1.4	1.7 Trichlorofluoromethane	170	--
	Jan/Feb 2003	0.8	1.2	1.0	0.8	--	--	--	0.7	--	--	68 J
	April/May 2003	1.3	9.2	1.0	0.4 J	--	--	--	1.5	5.0 J 4-Methyl-2-Pentanone	147	--
	July/Aug 2003	1.0	20.0	0.8	--	--	--	--	3.3	0.4 J Bromodichloromethane	159 J	--
	Oct/Nov 2003	1.5	9.0	0.9	0.4 J	--	--	--	1.7	--	--	223 J
MW-14	Screen 1	Aug/Sep 1996	--	--	2.4	--	--	--	0.6	--	--	(1)
		Oct/Nov 1996	--	--	2.9	--	--	--	--	--	--	(1)
		Feb/Mar 1997	--	0.7	1.5	--	--	--	0.7	--	--	(1)
		Jun/Jul 1997	--	--	2.0	--	--	--	--	--	--	--
		Sep/Oct 1997	--	--	1.9	--	--	--	--	--	--	--
		Jan/Feb 1998	--	--	2.1	--	--	--	0.5	--	--	--
		Apr/May 1998	--	1.2	0.8	--	--	--	0.8	--	--	4.4
		Jul/Aug 1998	--	0.8	1.7	--	--	--	0.6	--	--	4.4
		Oct/Nov 1998	--	0.5	2.4	--	--	--	0.6	--	--	4.2
		Feb/Mar 1999	--	0.8	1.2	--	--	0.6 ⁽⁴⁾	0.6	--	--	4.2
		May/Jun 1999	--	0.5	2.6	--	--	--	--	--	--	--
		Aug 1999	--	--	1.7	--	--	--	--	--	--	--
		Nov/Dec 1999	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
		Mar/Apr 2000	--	0.8	0.8	--	--	--	0.5(EB)	--	--	5.3
		Jul/Aug 2000	--	--	1.0	--	--	--	--	--	--	4.2
		Jan/Feb 2001	--	--	1.4	1.1	--	--	0.6	--	--	--
		April 2001	--	0.7	0.7	--	--	--	0.4 J	--	--	--
		July 2001	--	--	0.7	--	--	--	--	--	--	--
		October 2001	--	--	--	--	--	--	--	--	--	--
		Jan/Feb 2002	--	4.7	0.8	0.5 J	--	--	0.6	--	--	--
		April/May 2002	--	3.3	0.4 J	--	--	--	--	--	--	--
		July 2002	--	--	0.8	--	--	--	--	--	--	--
		Oct/Nov 2002	--	--	0.5	--	--	--	0.4 J	--	--	--
		Jan/Feb 2003	--	--	0.9	--	--	--	0.4 J	0.5 J Methylene Chloride	1.9 J	--
		April/May 2003	--	1.3	0.4 J	--	--	--	0.4 J	--	2.8 J	--

	July/Aug 2003	--	3.7	0.5 J	--	--	--	0.3 J	0.5 J Methylene Chloride	3.8 J
	--	--	--	0.4 J	0.5 J	--	--	--	--	--
Oct/Nov 2003	--	--	--	--	--	--	--	--	--	6.6 J

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 19 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
Screen 2	Aug/Sep 1996	--	2.8	1.6	1.4	--	--	1.5	--	(1)
	Oct/Nov 1996	--	1.5	1.6	1.0	--	--	0.9	0.6 1,2,3-Trichlorobenzene 1,1Acetone	(1)
	Feb/Mar 1997	--	0.9	1.9	1.3	--	--	0.8	0.8 1,2,3-Trichlorobenzene 1,1Acetone	(1)
	Jun/Jul 1997	--	1.1	1.7	1.5	--	--	0.9	0.5 1,2,3-Trichlorobenzene	--
	Sep/Oct 1997	--	1.2	1.9	1.6	--	--	0.8	8.9 Carbon Disulfide ⁽³⁾	--
	Jan/Feb 1998	--	--	1.2	0.7	--	--	--	9.0	
	Apr/May 1998	--	--	1.2	0.7	--	--	0.6	4.0	
	Jul/Aug 1998	--	0.9	1.8	0.8	--	--	0.6	4.9	
	Oct/Nov 1998	--	0.6	1.5	0.7	--	--	0.5	4.2	
	Feb/Mar 1999	--	0.9	1.6	0.7	--	0.6 ⁽⁴⁾	0.6	--	4.2
	May/Jun 1999	--	1.0	1.2	0.8	--	--	0.6(EB)	--	9.6
	Aug 1999	--	--	1.0	--	--	--	--	--	
	Nov/Dec 1999	--	1.0	0.8	--	--	--	--	5.2	
	Mar/Apr 2000	--	2.5	0.7	--	--	--	0.6(EB)	--	6.0
	Jul/Aug 2000	--	1.7	0.8	--	--	--	0.5(EB)	--	4.9
	Jan/Feb 2001	--	2.5	0.7	0.5J	--	--	0.7	--	--
	April 2001	--	4.2	0.9	0.7	--	--	0.5	--	--
	July 2001	--	3.4 ⁽⁵⁾	0.8	0.5J ⁽⁵⁾	--	--	--	--	--
	October 2001	--	1.5	--	--	--	--	--	--	--
	Jan/Feb 2002	--	4.7	0.8	0.5J	--	--	0.6	--	--
	April/May 2002	--	3.3	0.4J	--	--	--	--	--	--
	July 2002	--	5.9	0.8	0.5J	--	--	0.6	--	--
	Oct/Nov 2002	--	5.3	0.5	0.4J	--	--	0.5	--	--
	Jan/Feb 2003	--	6.2	0.7	0.4J	--	--	0.6	2.6 J	
	April/May 2003	--	3.7	0.5J	0.3J	--	--	0.4J	3.3 J	
	July/Aug 2003	--	1.0	0.5J	0.3J	--	--	0.4 J	5.4	
	Oct/Nov 2003	--	4.6	0.7	--	--	--	0.5J	4.7 J	
Screen 3	Aug/Sep 1996	--	--	--	--	--	--	--	--	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	--	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	4.3	
	Sep/Oct 1997	--	--	--	--	--	--	--	--	
	Jan/Feb 1998	--	--	--	--	--	--	--	5.6	
	Apr/May 1998	--	--	--	--	--	--	--	5.8	
	Jul/Aug 1998	--	--	--	--	--	--	--	5.9	
	Oct/Nov 1998	--	--	--	--	--	--	--	6.6	
	Feb/Mar 1999	--	--	0.5	--	--	--	0.5(EB)	6.8	
	May/Jun 1999	--	--	--	--	--	--	0.6(EB)	--	
	Aug 1999	--	--	--	--	--	--	--	7.0	
	Nov/Dec 1999	--	0.5	--	--	--	--	--	6.6	
	Mar/Apr 2000	--	0.8	0.5	--	--	--	0.6(EB)	7.9	

JUL/AUG 2000 -- 0.7 -- -- -- 0.5(FB) -- 7.5

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 20 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-14	Jan/Feb 2001	--	4.0	--	--	--	--	--	--	--	6.0
Screen 3 cont.	April 2001	--	0.7	0.3 J	--	--	--	--	0.4 J	--	--
	July 2001	--	1.1	0.7	0.4 J	--	--	--	--	--	--
	October 2001	--	0.6	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	1.6	0.6	0.5 J	--	--	--	0.6	--	5.9
	April/May 2002	--	0.9	0.4 J	--	--	--	--	0.5 J	--	--
	July 2002	--	1.1	0.6	--	--	--	--	0.6	--	--
	Oct/Nov 2002	--	0.8	0.3 J	--	--	--	--	0.5	--	--
	Jan/Feb 2003	--	1.1	--	0.3 J	--	--	--	0.5 J	--	2.9 J
	April/May 2003	--	--	--	--	--	--	--	0.3 J	--	5.7
	April/May 2003 Duplicate	--	--	--	--	--	--	--	0.3 J	--	5.4
	July/Aug 2003	--	--	--	--	--	--	--	--	0.3 J Methylene Chloride	3.0 J
	July/Aug 2003	--	--	--	--	--	--	--	--	0.8 Methylene Chloride	2.3 J
Screen 4	Oct/Nov 2003	--	--	--	--	--	--	--	0.4 J	--	7.2 J
	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	--	--	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	0.6 ⁽⁴⁾	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	9.9
	Aug 1999	--	--	--	--	--	--	--	--	--	4.0
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	4.1
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	4.2
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
	April 2001	--	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	--	0.4 J	--	--	--	--	--	--	--
	April/May 2002	--	--	--	--	--	--	--	--	--	--
	July 2002	--	--	0.4 J	--	--	--	--	--	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--	1.8 J
	Jan/Feb 2003 Duplicate	--	--	--	--	--	--	--	--	--	2.2 J
	April/May 2003	--	--	--	--	--	--	--	--	--	2.4 J
	July/Aug 2003	--	--	--	--	--	--	--	--	--	2.3 J

			4.4 J
Screen 5	Oct/Nov 2003	--	--
	Aug/Sep 1996	--	--
	Oct/Nov 1996	--	--
	Feb/Mar 1997	--	--
	Jun/Jul 1997	--	--
	Sep/Oct 1997	--	--
	Jan/Feb 1998	--	--
			4.6 Carbon Disulfide⁽³⁾

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 21 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-14	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
Screen 5 cont.	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--	--
Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--	--
May/Jun 1999	--	--	--	--	--	--	--	--	--	--	--
Aug 1999	--	--	--	--	--	--	--	--	--	--	--
Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--	--
Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--	--
April 2001	--	--	--	--	--	--	--	--	--	--	--
July 2001	--	--	--	--	--	--	--	--	--	--	--
October 2001	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--	--
April/May 2002	--	--	--	--	--	--	--	--	--	--	--
July 2002	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 2002	--	--	--	--	--	--	--	--	--	0.3 J Methylene Chloride	--
Jan/Feb 2003	--	--	--	--	--	--	--	--	--	--	--
April/May 2003	--	--	--	--	--	--	--	--	--	--	--
July/Aug 2003	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--	--
MW-15	Aug/Sep 1996	--	--	--	--	--	--	--	--	(1)	--
Oct/Nov 1996	--	--	--	--	--	--	--	--	--	(1)	--
Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)	--
Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--	--
Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--	--
Apr/May 1998	--	--	--	--	--	--	--	--	--	--	--
Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--	--
Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--	--
May/Jun 1999	--	--	--	--	--	--	--	--	--	--	--
Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--	--
Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--	--
April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--	--
April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 22 of 46)**

Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-15	July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
cont.	Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	April/May 2003	--	--	--	--	--	--	--	4.0 J 4-Methyl-2-Pentanone	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--
	Oct/Nov 2003 Duplicate	--	--	--	--	--	--	--	--	--
MW-16	Aug/Sep 1996	125	33	1.3	--	2.4	2.2	2.0	40(TB)	--
	Oct/Nov 1996	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
	Feb/Mar 1997	91	23	1.3	--	1.7	2.6	1.6	29	--
	Jun/Jul 1997	68	25	1.1	--	2.1	1.7	0.6	43	--
	Sep/Oct 1997	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
	Jan/Feb 1998	30	3.5	1.0	--	--	1.3	--	14	--
	Apr/May 1998	42	12	0.8	--	1.4	1.6	1.2	20	5.0 1,4-Dioxane
	Jul/Aug 1998	58	19	1.3	--	0.8	2.7	1.2	23	0.6 Dichloromethane ⁽⁴⁾
	Oct/Nov 1998	51	18	1.0	--	1.5	1.6	1.4	29	1.0 1,1,1-Trichloroethane
	Feb/Mar 1999	67	20	1.4	--	1.1	1.8	1.1	24	3.7 1,4-Dioxane
	May/Jul 1999	58	15	1.0	--	0.8	1.3	1.2	23	1.1 1,1,1-Trichloroethane
	Aug 1999	70	19	1.8	--	1.1	1.9	1.1	26(EB)	3.4 1,4-Dioxane
	Nov/Dec 1999	80	10	3.0	--	0.7	5.3	0.7	24	0.5 Fluorotrichloromethane
	Mar/Apr 2000	24	4.3	0.9	--	--	4.0	--	17	0.6 1,1,1-Trichloroethane
	Jul/Aug 2000	33	8.2	1.1	--	0.7	1.3	0.5	16	--
	Jan/Feb 2001	14.1	2.1	0.6	--	--	2.1	--	15.5	5.5 11,4-Dioxane
										0.6 J Methyl tertiary butyl ether
										1.0 Trichlorofluoromethane
	April 2001	21.0	3.6	--	--	--	1.7 ⁽⁵⁾	--	15.3	--
	July 2001	7.8	5.6	--	--	0.5 J⁽⁵⁾	0.5 J	--	7.1 ⁽⁵⁾	0.3 J Methyl tertiary butyl ether
	October 2001	10.3	2.3	--	--	--	0.8	--	7.5	--
	Jan/Feb 2002	13.2⁽⁵⁾	2.7⁽⁵⁾	0.6⁽⁵⁾	--	--	1.4⁽⁵⁾	--	16.7 ⁽⁵⁾	10 1,4-Dioxane ⁽⁵⁾
	April/May 2002	9.9⁽⁵⁾	1.8⁽⁵⁾	0.5 J⁽⁵⁾	--	--	1.3⁽⁵⁾	--	11.7 ⁽⁵⁾	0.3 J Trichlorofluoromethane
	July 2002	4.5	1.7	--	--	--	--	--	5.4	--
	Oct/Nov 2002	2.1⁽⁵⁾	0.8⁽⁵⁾	--	--	--	--	--	4.3	1.5 Trichlorofluoromethane
	Jan/Feb 2003	1.4	0.4 J	--	--	--	--	--	2.3	--
	April/May 2003	2.9	1.6	--	--	0.9	--	--	3.8	4.0 J 4-Methyl-2-Pentanone
	July/Aug 2003	1.9	3.7	--	--	--	--	--	3.5	0.4 J Chlorodibromomethane
	Oct/Nov 2003	3.1	1.9	--	--	--	--	--	4.6	--
MW-17	Screen 1	Aug/Sep 1996	--	--	--	--	--	--	4.3(B) Acetone	(1)
		Oct/Nov 1996	--	--	--	--	--	--	1.4 Acetone	(1)

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 23 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-17	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
Screen 1 cont.	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--	--
May/Jun 1999	--	--	--	--	--	--	--	--	--	--	--
Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--	--
Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 2001	--	--	--	--	--	--	--	--	--	0.3 J	tertiary butyl ether
April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
January/February 2002	--	--	--	--	--	--	--	--	--	7.3	Methylene chloride
April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
January/February 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
April/May 2003	--	--	--	--	--	--	--	--	--	5.0 J	4-Methyl-2-Pentanone
Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--	--
Screen 2 Aug/Sep 1996	--	--	--	--	--	--	--	3.8	4.5(B) Acetone	(1)	(1)
Oct/Nov 1996	--	--	--	--	--	--	--	6.0	--	(1)	(1)
Feb/Mar 1997	--	--	--	--	--	--	--	5.2	--	(1)	(1)
Jun/Jul 1997	--	--	--	--	--	--	--	4.1	--	--	--
Sep/Oct 1997	--	--	--	--	--	--	--	6.1	--	--	--
Jan/Feb 1998	--	--	--	--	--	--	--	5.4	--	--	--
Apr/May 1998	--	--	--	--	--	--	--	3.2	--	--	--
Jul/Aug 1998	--	--	--	--	--	--	--	2.4	--	--	--
Oct/Nov 1998	--	--	--	--	--	--	--	3.7	--	--	--
Feb/Mar 1999	--	--	--	--	--	--	1.0 ⁽⁴⁾	3.9	--	--	--
May/Jun 1999	--	--	--	--	--	--	--	3.2(EB)	--	--	--
Aug 1999	--	--	--	--	--	--	--	2.5	--	--	--
Nov/Dec 1999	--	--	--	--	--	--	--	1.4(EB)	--	--	--
Mar/Apr 2000	--	--	--	--	--	--	--	1.9(EB)	--	--	--
July/Aug 2000	--	--	--	--	--	--	--	1.1(EB)	--	--	--
Jan/Feb 2001	--	--	--	--	--	--	--	0.5 J ⁽⁵⁾	0.4 J	tertiary butyl ether ⁽⁵⁾	--
April 2001	--	--	--	--	--	--	--	0.4 J	--	--	--
July 2001	--	--	--	--	--	--	--	0.4 J	--	--	--
October 2001	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 2002	--	--	--	--	--	--	--	--	--	15	Methylene chloride
April/May 2002	--	--	--	--	--	--	--	--	--	--	--
July 2002	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 2002	0.8	--	--	--	--	--	--	--	--	--	--
Jan/Feb 2003	1.2	--	--	--	--	--	--	0.3 J	--	3.4 J	--

April/May 2003	--	0.9	--	--	--	--
July/Aug 2003	0.7	3.4	--	--	--	--
Oct/Nov 2003	1.0	6.2	0.4 J	--	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 24 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-17	Aug/Sep 1996	2.0	7.9	--	--	--	--	--	7.5	--	(1)
Screen 3	Oct/Nov 1996	3.3	18	0.8	--	--	--	--	8.7	--	(1)
	Feb/Mar 1997	5.1	23	1.1	--	--	--	--	6.2	--	(1)
	Jun/Jul 1997	1.3	5.9	--	--	--	--	--	8.2	--	12
	Sep/Oct 1997	6.6	22	1.4	--	--	--	--	9.2	--	55
	Jan/Feb 1998	3.3	8.7	--	--	--	--	--	6.8	--	25
	Apr/May 1998	--	0.9	--	--	--	--	--	5.3	--	--
	Jul/Aug 1998	--	1.0	--	--	--	--	--	4.9	--	--
	Oct/Nov 1998	--	1.9	--	--	--	--	--	4.1	--	5.1
	Feb/Mar 1999	--	1.6	--	--	--	--	--	3.8	--	4.2
	May/Jun 1999	--	1.5	--	--	--	--	--	3.5(EB)	--	--
	Aug 1999	0.8	2.9	--	--	--	--	--	4.6	--	6.1
	Nov/Dec 1999	0.7	3.2	--	--	--	--	--	4.4(EB)	--	5.5
	Mar/Apr 2000	--	1.9	--	--	--	--	--	2.6(EB)	--	5.0
	Jul/Aug 2000	--	1.6	--	--	--	--	--	2.8(EB)	--	6.7
	Jan/Feb 2001	0.5	1.1	--	--	--	--	--	1.8	0.5 J Methyl tertiary butyl ether	--
	April 2001	0.4 J	--	--	--	--	--	--	2.3	--	5.0
	July 2001	0.6	0.8	--	--	--	--	--	1.5	--	--
	October 2001	--	--	--	--	--	--	--	1.4	--	7.3
	Jan/Feb 2002	0.7	1.3	--	--	--	--	--	1.5	--	6.3
	April/May 2002	1.6	1.9	--	--	--	--	--	2.6	--	3.7 J
	July 2002	1.0	1.2	--	--	--	--	--	2.0	--	3.8 J
	Oct/Nov 2002	7.1	2.6	--	--	--	--	--	2.7	--	115
	Jan/Feb 2003	13.1	3.9	0.4 J	--	--	--	--	3.1	0.5 J 1,1,2-Trichlorotrifluoroethane	145
	April/May 2003	6.4	1.9	--	--	--	--	--	1.7	--	126.0
	July/Aug 2003	13.0	3.8	0.4 J	--	--	--	--	3.6	--	209.0 J
	Oct/Nov 2003	11.0	3.1	0.4 J	--	--	--	--	2.6	--	199.0 J
	Oct/Nov 2003	13.7	3.8	0.6	--	--	--	--	3.1	--	193.0 J
	Duplicate										
Screen 4	Aug/Sep 1996	--	9.5	0.5	--	--	--	--	1.1	--	(1)
	Oct/Nov 1996	--	8.0	--	--	--	--	--	1.5	--	(1)
	Feb/Mar 1997	--	5.8	--	--	--	--	--	0.7	--	(1)
	Jun/Jul 1997	--	4.5	--	--	--	--	--	0.6	--	13
	Sep/Oct 1997	--	6.3	0.5	--	--	--	--	1.0	--	16
	Jan/Feb 1998	--	7.3	0.6	--	--	--	--	1.2	--	16
	Apr/May 1998	--	7.6	0.6	--	--	--	--	1.5	--	17
	Jul/Aug 1998	--	8.9	0.6	--	--	--	--	1.9	--	14
	Oct/Nov 1998	--	6.2	0.5	--	--	--	--	1.9	--	12
	Feb/Mar 1999	--	3.8	--	--	--	--	--	1.0 ⁽⁴⁾	1.8	--
	May/June 1999	--	3.2	--	--	--	--	--	1.4(EB)	--	14
	Aug 1999	--	3.5	--	--	--	--	--	1.5	--	12
	Nov/Dec 1999	--	6.3	--	--	--	--	--	2.0(EB)	--	10
	Mar/Apr 2000	--	9.9	0.6	--	--	--	--	1.8(EB)	--	15

	Jul/Aug 2000	--	6.0	--	--	--	--	1.4(EB)	--	13
	Jan/Feb 2001	--	4.6	0.3J	--	--	--	0.9	0.4 J Methyl tertiary butyl ether	8.0
	April 2001	--	3.0	--	--	--	--	0.8	--	12.0

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 25 of 46)**

Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded
(concentrations in µg/L)

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-17	July 2001	--	5.7	0.4 J	--	--	--	1.0	--	10
Screen 4	October 2001	--	4.8	--	--	--	--	1.0	0.9 Toluene	8.2
cont.	Jan/Feb 2002	--	6.2	0.4 J	--	--	--	1.1	--	11.0
	April/May 2002	0.8	15.5	1.4	--	--	--	2.2	--	7.0 J
	July 2002	--	4.6	0.4 J	--	--	--	0.7	--	--
	Oct/Nov 2002	--	3.0	--	--	--	--	0.4 J	--	--
	Jan/Feb 2003	--	4.6	--	--	--	--	0.7	--	--
	April/May 2003	--	6.2	0.4 J	--	--	--	1.0	4.0 J 4-Methyl-2-Pentanone	6.5
	July/Aug 2003	--	1.0	--	--	--	--	--	--	--
	Oct/Nov 2003	--	0.8	--	--	--	--	--	--	--
Screen 5	Aug/Sep 1996	--	13	0.6	--	--	--	1.7	3.4(B) Acetone	(1)
	Oct/Nov 1996	--	16	0.7	--	--	--	1.7	--	(1)
	Feb/Mar 1997	--	14	0.7	--	--	--	1.3	--	(1)
	Jun/Jul 1997	--	11	0.7	--	--	--	1.3	--	12
	Sep/Oct 1997	--	8.6	0.6	--	--	--	1.4	--	15
	Jan/Feb 1998	--	7.9	--	--	--	--	1.5	--	15
	Apr/May 1998	--	8.8	0.6	--	--	--	1.8	--	15
	Jul/Aug 1998	--	8.9	0.6	--	--	--	2.0	--	13
	Oct/Nov 1998	--	11	0.8	--	--	--	2.7	--	12
	Feb/Mar 1999	--	4.9	--	--	--	--	2.1	--	6.4
	May/Jun 1999	--	6.6	0.6	--	--	--	2.0(EB)	--	12
	Aug 1999	--	4.0	--	--	--	--	1.6	--	11
	Nov/Dec 1999	--	6.7	--	--	--	--	2.1(EB)	--	9.1
	Mar/Apr 2000	--	8.8	--	--	--	--	1.8(EB)	--	15
	Jul/Aug 2000	--	7.1	0.6	--	--	--	1.5(EB)	--	12
	Jan/Feb 2001	0.3 J	7.5	0.5 J	--	--	--	1.2	0.6 J Methyl tertiary butyl ether	7
	April 2001	--	5.7	0.4 J	--	--	--	1.2	--	19
	July 2001	0.3 J	6.1	0.5 J	--	--	--	1.0	--	22
	October 2001	--	6.6	0.4 J	--	--	--	1.2	0.7 Toluene	10.4
	Jan/Feb 2002	--	6.1	--	--	--	--	1.1	--	14.7
	April/May 2002	0.3 J	9.5	0.8	--	--	--	1.6	--	4.4 J
	July 2002	--	2.3	--	--	--	--	--	--	--
	Oct/Nov 2002	--	1.0	--	--	--	--	--	--	--
	Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	April/May 2003	--	3.1	--	--	--	--	0.6	3.0 J 4-Methyl-2-Pentanone	3.6 J
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--
MW-18	Screen 1	Aug/Sep 1996	--	--	--	--	--	1.6	--	(1)
	Oct/Nov 1996	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
	Feb/Mar 1997	--	--	--	--	--	--	3.0	--	(1)
	Jun/Jul 1997	--	--	--	--	--	--	0.8	--	--
	Sep/Oct 1997	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
	Jan/Feb 1998	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)

Apr/May 1998 -- -- -- -- -- 0.7 --
 Jul/Aug 1998 -- -- -- -- -- -- --
 Oct/Nov 1998 -- -- -- -- -- -- --
3.4 Unknown Hydrocarbon (RT=7.14)
--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 26 of 46)**
(concentrations in µg/L)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-18	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
Screen 1	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
cont.	Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Nov/Dec 1999	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
	April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jan/Feb 2002	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
	April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	April/May 2003	--	--	--	--	--	--	--	--	4.0 J 4-Methyl-2-Pentanone	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--
Screen 2	Aug/Sep 1996	--	--	--	--	--	--	--	7.3	--	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	8.2	--	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	1.9	--	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	4.5	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	2.5	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	3.7	--	--
	Apr/May 1998	--	--	--	--	--	--	--	3.2	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	0.9	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	3.0	0.8 Bromodichloromethane	--
	May/Jun 1999	--	--	--	--	--	--	--	0.8(EB)	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	2.5(EB)	0.9 Bromodichloromethane	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	1.2	0.4 J Bromodichloromethane	--
	April 2001	--	--	--	--	--	--	--	1.2	--	--
	July 2001	--	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	--	--	--	--	--	--	0.7	--	--
	April/May 2002	--	--	--	--	--	--	--	0.5	--	--
	July 2002	--	--	--	--	--	--	--	0.4 J	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--	--
	April/May 2003	--	--	--	--	--	--	--	--	4.0 J 4-Methyl-2-Pentanone	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 27 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-18	Aug/Sep 1996	0.7	4.7	2.8	--	--	--	--	5.1	--	(1)
Screen 3	Oct/Nov 1996	0.7	6.4	3.2	--	--	--	--	5.6	--	(1)
	Feb/Mar 1997	0.8	6.6	2.9	--	--	--	--	5.1	--	(1)
	Jun/Jul 1997	0.6	2.4	1.8	--	--	--	--	4.4	--	--
	Sep/Oct 1997	--	3.0	1.9	--	--	--	--	6.2	--	--
	Jan/Feb 1998	--	1.9	1.7	--	--	--	--	6.6	4.1 Unknown (RT=4.33)	--
	Apr/May 1998	0.5	1.8	1.3	--	--	--	--	5.7	--	5.0
	Jul/Aug 1998	--	1.5	0.9	--	--	--	--	4.6	--	5.2
	Oct/Nov 1998	--	1.4	0.8	--	--	--	--	4.2	--	--
	Feb/Mar 1999	--	1.0	0.5	--	--	--	--	3.5	--	--
	May/Jun 1999	--	1.1	--	--	--	--	--	2.5(EB)	0.6 Dichloromethane	--
	Aug 1999	--	1.0	--	--	--	--	--	2.8	--	--
	Nov/Dec 1999	--	0.8	--	--	--	--	--	0.8(EB)	--	--
	Mar/Apr 2000	--	1.1	0.5	--	--	--	--	3.1(EB)	--	--
	Jul/Aug 2000	--	0.6	--	--	--	--	--	2.6(EB)	--	--
	Jan/Feb 2001	--	0.5	0.3 J	--	--	--	--	2.2	--	--
	April 2001	--	0.6	--	--	--	--	--	1.9	--	--
	July 2001	--	--	--	--	--	--	--	1.8	--	--
	October 2001	1.0	--	--	--	--	--	--	1.7	--	--
	Jan/Feb 2002	--	0.6 ⁽⁵⁾	0.4 J ⁽⁵⁾	--	--	--	--	2.0 ⁽⁵⁾	--	--
	April/May 2002	--	0.6	0.5	--	--	--	--	2.9	--	--
	July 2002	--	0.4 J	--	--	--	--	--	1.9	--	--
	Oct/Nov 2002	--	0.4 J	--	--	--	--	--	1.5	--	--
	Jan/Feb 2003	--	0.4 J	--	--	--	--	--	1.6	--	--
	April/May 2003	--	0.4 J	--	--	--	--	--	1.2	4.0 J 4-Methyl-2-Pentanone	1.3 J
	July/Aug 2003	--	0.4 J	--	--	--	--	--	1.5	--	1.3 J
	Oct/Nov 2003	--	--	--	--	--	--	--	1.1	--	--
Screen 4	Aug/Sep 1996	2.2	--	0.7	--	--	--	--	0.5	--	(1)
	Oct/Nov 1996	2.2	--	0.7	--	--	--	--	0.5	1.4(TB) Acetone	(1)
	Feb/Mar 1997	2.2	--	1.5	--	--	--	--	0.6	--	11
	Jun/Jul 1997	1.9	--	0.7	--	--	--	--	--	1.5 Carbon Disulfide	12
	Sep/Oct 1997	2.4	--	0.7	--	--	--	--	--	1.5	11
	Jan/Feb 1998	2.6	--	1.0	--	--	--	--	0.5	--	13
	Apr/May 1998	3.1	0.6	1.4	--	--	--	--	0.8	--	16
	Jul/Aug 1998	2.5	0.6	1.2	--	--	--	--	0.6	--	23
	Oct/Nov 1998	3.4	0.8	1.5	--	--	--	--	0.7	--	19
	Feb/Mar 1999	4.7	1.2	2.3	--	--	--	--	1.1	--	24
	May/Jun 1999	3.6	1.6	2.5	--	--	--	--	1.1(EB)	0.7 Dichloromethane	16
	Aug 1999	3.6	1.1	1.9	--	--	--	--	0.8	--	23
	Nov/Dec 1999	3.8	1.2	2.0	--	--	--	--	0.8(EB)	--	23
	Mar/Apr 2000	3.8	1.2	2.2	--	--	--	--	0.9(EB)	--	24
	Jul/Aug 2000	3.6	1.1	2.0	--	--	--	--	0.9(EB)	--	24
	Jan/Feb 2001	3.5	1.1	1.9	--	--	--	--	0.8	--	15

April 2001 **2.6** 1.5 1.9 -- -- -- 1.0 --
29

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 28 of 46)**
(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-18	July 2001	3.7	--	1.6	--	--	--	--	0.7	--	25
Screen 4	October 2001	4.7	1.5	2.1	--	--	--	--	0.8	--	20.3
cont.	Jan/Feb 2002	4.6	1.4	2.2	--	--	--	--	0.9	--	17.9
	April/May 2002	11.7	5.5	7.7	--	--	--	--	2.8	--	24.5
	July 2002	7.8	3.5	4.6	--	--	--	--	1.8	--	31.3
	Oct/Nov 2002	4.9	2.4	3.7	--	--	--	--	1.3	--	28.2
	Jan/Feb 2003	6.7	2.6	4.8	0.5	0.5	0.5	0.5	1.3	--	24.6
	April/May 2003	2.4	1.0	2.1	0.5	0.5	0.5	0.5	0.9	7.0 J 4-Methyl-2-Pentanone	23.9
	Duplicate	2.4	0.9	1.9	0.5	0.5	0.5	0.5	0.8	6.0 J 4-Methyl-2-Pentanone	23.8
	July/Aug 2003	3.3	1.1	1.9	0.5	0.5	0.5	0.5	1.0	--	15.0
	Oct/Nov 2003	3.4	1.0	1.5	0.5	0.5	0.5	0.5	0.8	--	17.2 J
Screen 5	Aug/Sep 1996	--	--	--	--	--	--	--	--	--	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	--	1.6 Acetone	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	--	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	--	1.1 Carbon Disulfide	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	4.6 Hexane	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	0.8 Dichloromethane	--
	Aug 1999	--	--	--	--	--	--	--	--	1.0 Unknown (RT=4.25)	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	0.6 Unknown (RT=4.82)	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	1.4 Chloromethane	--
	April 2001	--	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--
	April/May 2002	--	--	--	--	--	--	--	--	--	--
	July 2002	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--	--
	April/May 2003	--	--	--	--	--	--	--	--	5.0 J 4-Methyl-2-Pentanone	--
MW-19	Aug/Sep 1996	--	--	--	--	--	--	--	0.9	3.7(B) Acetone	(1)
Screen 1	Oct/Nov 1996	--	--	--	--	--	--	--	0.6	2.9 Acetone	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	0.8	--	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	2.5	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	1.4	--	--

Jan/Feb 1998	--	--	--	--	--	0.8	--
Apr/May 1998	--	--	--	--	--	--	--
Jul/Aug 1998	--	--	--	--	--	--	--
Oct/Nov 1998	--	--	--	--	--	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 29 of 46)**

(concentrations in µg/L)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-19	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
Screen 1	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
cont.	Aug 1999	--	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
	April 2001	--	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--
	April/May 2002	--	--	--	--	--	--	--	--	--	--
	July 2002	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--	--
	April/May 2003	--	--	--	--	--	--	--	--	--	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--
Screen 2	Aug/Sep 1996	--	0.8	--	--	--	--	--	--	3.0(B) Acetone	(1)
	Oct/Nov 1996	--	1.1	--	--	--	--	--	--	--	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	--	--
	Jun/Jul 1997	--	0.6	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	0.6	0.9	--	--	--	--	--	--	--	--
	Apr/May 1998	0.9	1.2	--	--	--	--	--	--	--	--
	Jul/Aug 1998	0.6	0.7	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	0.6	--	--	--	--	--	--	--	--	--
	May/Jun 1999	1.3	1.1	--	--	--	--	--	--	--	--
	Aug 1999	--	0.7	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	0.5	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	0.6	0.5	--	--	--	--	--	--	--
	Jul/Aug 2000	--	0.6	--	--	--	--	--	--	--	--
	Jan/Feb 2001	0.6(s)	--	--	--	--	--	--	--	--	--
	April 2001	1.2	0.5J	--	--	--	--	--	0.4J	--	--
	July 2001	1.6(s)	0.8(s)	--	--	--	--	--	--	--	--
	October 2001	0.5J	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	0.6	0.3J	--	--	--	--	--	--	--	--
	April/May 2002	1.7	0.8	--	--	--	--	--	0.6	--	--
	July 2002	1.7	1.0	0.5J	--	--	--	--	0.9	--	--
	Oct/Nov 2002	1.1	0.7	--	--	--	--	--	0.6	--	--
	Jan/Feb 2003	1.1	2.0	0.4J	--	--	--	--	0.7	--	--
	April/May 2003	0.4J	1.0	--	--	--	--	--	0.6	--	4.3

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
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(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-19	Feb/Mar 1997	--	2.1	--	--	--	--	--	--	--	(1) 4.1
Screen 3	Jun/Jul 1997	--	2.0	--	--	--	--	--	--	--	--
cont.	Sep/Oct 1997	--	1.5	--	--	--	--	--	0.6 Toluene	--	--
	Jan/Feb 1998	--	2.1	--	--	--	--	--	--	--	--
	Apr/May 1998	--	2.5	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	2.1	--	--	--	--	--	--	--	4.4
	Oct/Nov 1998	--	2.0	--	--	--	--	--	--	--	4.2
	Feb/Mar 1999	--	1.5	--	--	--	--	--	--	--	--
	May/Jun 1999	--	0.9	2.7	--	--	--	--	--	--	7.2
	Aug 1999	--	0.6	1.9	--	--	--	--	--	--	4.4
	Nov/Dec 1999	--	0.6	1.9	--	--	--	--	--	--	5.0
	Mar/Apr 2000	--	0.8	2.0	--	--	--	--	--	--	4.8
	Jul/Aug 2000	--	0.7	1.8	--	--	--	--	--	--	5.0
	Jan/Feb 2001	--	0.5	1.4	--	--	--	--	--	--	--
	April 2001	--	0.5	1.2	--	--	--	--	0.3 J	--	--
	July 2001	--	0.9	1.8	--	--	--	--	0.5 J	--	--
	October 2001	--	0.5 J	1.3	--	--	--	--	--	--	--
	Jan/Feb 2002	--	1.1 ⁽⁵⁾	3.1 ⁽⁵⁾	--	--	--	--	0.6 ⁽⁵⁾	--	--
	April/May 2002	--	1.1	3.1	--	--	--	--	0.8	--	--
	July 2002	--	1.1	2.2	--	--	--	--	0.8	--	--
	Oct/Nov 2002	--	0.6	1.3	--	--	--	--	0.5 J	--	--
	Jan/Feb 2003	--	0.5 J	1.5	--	--	--	--	0.6	--	--
	April/May 2003	--	0.8	--	--	--	--	--	--	--	3.6 J
	July/Aug 2003	--	0.4 J	1.7	--	--	--	--	--	--	3.0 J
	Oct/Nov 2003	--	0.3 J	1.4	--	--	--	--	0.4 J	--	5.1 J
Screen 4	Aug/Sep 1996	0.5	1.5	--	--	--	--	--	2.1	--	(1)
	Oct/Nov 1996	--	1.5	--	--	--	--	--	1.9	--	(1)
	Feb/Mar 1997	--	1.1	0.6	--	--	--	--	1.5	--	(1)
	Jun/Jul 1997	--	0.7	--	--	--	--	--	1.3	--	--
	Sep/Oct 1997	--	0.7	0.6	--	--	--	--	1.7	--	4.9
	Jan/Feb 1998	--	0.5	0.6	--	--	--	--	1.3	--	--
	Apr/May 1998	--	0.8	1.0	--	--	--	--	1.6	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	1.4	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	2.2	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	3.0	--	--
	May/Jun 1999	--	0.7	--	--	--	--	--	2.6(EB)	--	--
	Aug 1999	--	0.5	--	--	--	--	--	2.7	--	--
	Nov/Dec 1999	--	0.5	--	--	--	--	--	2.1(EB)	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	2.0(EB)	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	3.2(EB)	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	2.6	--	--
	April 2001	--	--	--	--	--	--	--	2.0	--	--
	July 2001	--	--	--	--	--	--	--	2.4	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 31 of 46)**

Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-19	Jan/Feb 2002	--	--	--	--	--	--	2.6	--	--
Screen4	April/May 2002	--	0.3 J	--	--	--	--	3.8	--	--
cont.	July 2002	--	0.3 J	--	--	--	--	3.8	0.5 J Bromodichloromethane	--
	Oct/Nov 2002	--	--	--	--	--	--	2.1	--	--
	Jan/Feb 2003	--	--	--	--	--	--	2.0	--	--
	Jan/Feb 2003	--	--	--	--	--	--	1.9	--	--
	Duplicate	--	--	--	--	--	--	0.7	--	--
	April/May 2003	--	--	--	--	--	--	1.0	--	--
	July/Aug 2003	--	0.3 J	--	--	--	--	1.4	--	--
	July/Aug 2003	--	0.4 J	--	--	--	--	--	--	--
	Duplicate	--	--	--	--	--	--	1.3	--	--
Screen 5	Aug/Sep 1996	--	3.0	--	--	--	--	0.6	1.6(B) Unknown scan #940	(1)
	Oct/Nov 1996	--	2.4	--	--	--	--	--	--	(1)
	Feb/Mar 1997	--	1.7	--	--	--	--	--	--	(1)
	Jun/Jul 1997	--	1.5	--	--	--	--	--	--	--
	Sep/Oct 1997	--	2.2	--	--	--	--	0.8	--	--
	Jan/Feb 1998	--	1.4	--	--	--	--	--	--	--
	Apr/May 1998	--	0.9	--	--	--	--	0.6	--	--
	Jul/Aug 1998	--	1.5	--	--	--	--	--	--	--
	Oct/Nov 1998	--	1.5	--	--	--	--	--	--	--
	Feb/Mar 1999	--	1.3	--	--	--	--	--	--	--
	May/Jun 1999	--	2.1	--	--	--	--	--	0.7 Dichloromethane	4.4
	Aug 1999	--	1.5	--	--	--	--	--	--	4.2
	Nov/Dec 1999	--	1.5	--	--	--	--	--	--	--
	Mar/Apr 2000	--	1.4	--	--	--	--	0.6(EB)	--	--
	Jul/Aug 2000	--	0.5	1.7	--	--	--	0.5(EB)	--	4.2
	Jan/Feb 2001	--	0.4 J	2.1	--	--	--	--	--	--
	April 2001	--	0.4 J	2.5	--	--	--	--	--	--
	July 2001	--	0.4 J	1.1	--	--	--	0.5 J	--	--
	October 2001	--	0.9	--	--	--	--	0.5 J	--	--
	Jan/Feb 2002	--	0.5	1.4	--	--	--	0.8	--	--
	April/May 2002	--	0.6	3.3	--	--	--	0.7	--	--
	July 2002	--	0.6	4.5	--	--	--	0.8	--	--
	Oct/Nov 2002	--	0.4 J	4.0	--	--	--	0.4 J	--	--
	Jan/Feb 2003	--	0.4 J	4.2	--	--	--	--	--	--
	April/May 2003	--	2.8	--	--	--	--	0.3 J	--	--
	July/Aug 2003	--	3.8	--	--	--	--	--	--	--
	Oct/Nov 2003	--	0.3 J	3.9	--	--	--	0.3 J	--	--
MW-20										
Screen 1	Aug/Sep 1996	--	--	--	--	--	--	0.7	3.4(B) Acetone	(1)
	Oct/Nov 1996	(6)	(6)	(6)	(6)	(6)	(6)	(6)	2.4(EB) Acetone	(6)
	Feb/Mar 1997	--	--	--	--	--	--	1.4	--	(1)

Jun/Jul 1997	--	--	--	--	--	--	--	0.8	--	5.7
Sep/Oct 1997	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
Jan/Feb 1998	--	--	--	--	--	--	--	1.4	--	6.3
Apr/May 1998	--	--	--	--	--	--	--	2.5	--	5.5
Jul/Aug 1998	--	--	--	--	--	--	--	1.8	--	5.9
Oct/Nov 1998	--	--	--	--	--	--	--	0.8	--	7.8
Feb/Mar 1999	--	--	--	--	--	--	--	2.2	--	4.9
May/Jun 1999	--	--	--	--	--	--	--	1.9(EB)	--	4.4

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 32 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-20	Aug 1999	--	--	--	--	--	--	0.6	--	7.5	
Screen 1	Nov/Dec 1999	--	--	--	--	--	--	1.3 (EB)	--	7.7	
cont.	Mar/Apr 2000	--	--	--	--	--	--	1.1 (EB)	--	7.6	
	Jul/Aug 2000	--	--	--	--	--	--	--	--	7.5	
	Jan/Feb 2001	--	--	--	--	--	--	1.4	0.3 J Methyl tertiary butyl ether	5.0	
	April 2001	--	--	--	--	--	--	0.9	--	--	
	July 2001	--	--	--	--	--	--	0.6	--	--	
	October 2001	--	--	--	--	--	--	--	--	--	
	Jan/Feb 2002	--	--	--	--	--	--	0.8	--	6.6	
	April/May 2002	--	--	--	--	--	--	0.5	--	--	
	July 2002	--	--	--	--	--	--	0.7	--	--	
	Oct/Nov 2002	--	--	--	--	--	--	0.6	--	--	
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--	
	Jan/Feb 2003	--	--	--	--	--	--	0.3 J	--	--	
Duplicate								--	--	--	
	April/May 2003	--	--	--	--	--	--	--	--	--	
	April/May 2003	--	--	--	--	--	--	0.5 J	--	1.5 J	
Duplicate								--	--	--	
	July/Aug 2003	--	--	--	--	--	--	0.4 J	3.0 J 4-Methyl-2-Pentanone	4.1 J	
	Oct/Nov 2003	--	--	--	--	--	--	2.2 Chloroethane 0.9 Chloromethane			
Screen 2	Aug/Sep 1996	--	--	--	--	--	--	7.7	4.0(B) Acetone	(1)	
	Oct/Nov 1996	--	--	--	--	--	--	4.4	--	(1)	
	Feb/Mar 1997	--	--	--	--	--	--	3.2	--	(1)	
	Jun/Jul 1997	--	--	--	--	--	--	3.3	--	--	
	Sep/Oct 1997	--	--	--	--	--	--	5.7	--	--	
	Jan/Feb 1998	--	--	--	--	--	--	2.7	--	--	
	Apr/May 1998	--	--	--	--	--	--	2.7	--	--	
	Jul/Aug 1998	--	--	--	--	--	--	4.2	0.5 Dichlorobromomethane	--	
	Oct/Nov 1998	--	--	--	--	--	--	3.6	--	--	
	Feb/Mar 1999	--	--	--	--	--	--	4.2	--	--	
	May/Jun 1999	--	--	--	--	--	--	4.6 (EB)	0.6 Bromodichloromethane	--	
	Aug 1999	--	--	--	--	--	--	4.8	0.6 Bromodichloromethane	--	
	Nov/Dec 1999	--	--	--	--	--	--	3.8 (EB)	--	--	
	Mar/Apr 2000	--	--	--	--	--	--	3.8 (EB)	--	--	
	Jul/Aug 2000	--	--	--	--	--	--	4.1 (EB)	0.6 Bromodichloromethane	--	
	Jan/Feb 2001	--	--	--	--	--	--	2.8	--	--	
	April 2001	--	--	--	--	--	--	2.9	--	--	
	July 2001	--	--	--	--	--	--	3.9	--	--	
	October 2001	--	--	--	--	--	--	2.6	--	--	
	Jan/Feb 2002	--	--	--	--	--	--	3.2	0.3 J Bromodichloromethane	--	
	April/May 2002	--	--	--	--	--	--	2.9	--	--	

July 2002	--	--	--	--	--	3.2
Oct/Nov 2002	--	--	--	--	--	0.6 (Bromodichloromethane)
Jan/Feb 2003	--	--	--	--	--	0.5 J (Bromodichloromethane)
April/May 2003	--	--	--	--	--	--
July/Aug 2003	--	--	--	--	--	3.0 J 4-Methyl-2-Pentanone
Oct/Nov 2003	--	--	--	--	--	--
Oct/Nov 2003	--	--	--	--	--	0.3 J Bromodichloromethane
Duplicate						
Screen 3						
Aug/Sep 1996	--	--	--	--	--	2.7(B) Acetone (1)
Oct/Nov 1996	--	--	--	--	--	2.3 Acetone (1)
Feb/Mar 1997	--	--	--	--	--	(1)
Jun/Jul 1997	--	--	--	--	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 33 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-20	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
Screen 3	Jan/Feb 1998	--	--	--	--	--	--	--	--	3.4 Unknown (RT=6.2)	--
cont.	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	0.4 J Methyl tertiary butyl ether	--
	April 2001	--	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	0.3 J	--	--	--	--	--	--	--	--
	April/May 2002	--	--	--	--	--	--	--	--	--	--
	July 2002	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--	--
	April/May 2003	--	--	--	--	--	--	--	--	4.0 J 4-Methyl-1-2-Pentanone	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--	--
	July/Aug 2003	--	--	--	--	--	--	--	--	--	--
Duplicate											
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--
Screen 4	Aug/Sep 1996	--	--	--	--	--	--	--	3.8(B) Acetone	(1)	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	--	(1)	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	--	--
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	20	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	0.8 J Methyl tertiary butyl ether (EB) ⁽⁵⁾	--	--
	April 2001	--	--	--	--	--	--	--	0.6 Styrene ⁽⁵⁾	--	--

	July 2001	--
	October 2001	--
	Jan/Feb 2002	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 34 of 46)**

(concentrations in µg/L)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-20	April/May 2002	--	--	--	--	--	--	--	--	30.0
Screen 4	July 2002	--	--	--	--	--	--	--	--	--
cont.	Oct/Nov 2002	--	--	--	--	--	--	--	--	58.5
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--
	April/May 2003	--	--	--	--	--	--	--	--	124
	July/Aug 2003	--	--	--	--	--	--	--	--	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--
Screen 5	Aug/Sep 1996	--	--	--	--	--	--	--	4.8(B) Acetone	(1)
	Oct/Nov 1996	--	--	--	--	--	--	--	--	(1)
	Feb/Mar 1997	--	--	--	--	--	--	--	--	(1)
	Jun/Jul 1997	--	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	8.2
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	0.7 Carbonyl Sulfide	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	0.4 J Styrene	--
	April 2001	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	--	--	--	--	--	--	--	--
	April/May 2002	--	--	--	--	--	--	--	0.5 J Styrene	--
	July 2002	--	--	--	--	--	--	--	0.5 J Styrene	--
	Oct/Nov 2002	--	--	--	--	--	--	--	0.6 Styrene	--
	Jan/Feb 2003	--	--	--	--	--	--	--	3.0 1,2-Butanone	--
	April/May 2003	--	--	--	--	--	--	--	0.6 Styrene	--
	July/Aug 2003	--	--	--	--	--	--	--	0.5 J Styrene	--
	Oct/Nov 2003	--	--	--	--	--	--	--	0.4 J Styrene	--
MW-21	Aug/Sep 1996	--	33	0.7	--	--	--	--	1.8	2.3(B) Acetone
Screen 1	Oct/Nov 1996	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(1)
	Feb/Mar 1997	--	29	--	--	--	--	--	2.2	(6)
	Jun/Jul 1997	--	20	--	--	--	--	--	1.6	(1)
	Sep/Oct 1997	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	19
	Jan/Feb 1998	--	16	--	--	--	--	--	1.8	(6)
	Apr/May 1998	--	16	--	--	--	--	--	1.8	(6)

	Jul/Aug 1998	--	16	0.6	--	--	--	1.8	--	13
	Oct/Nov 1998	--	10	--	--	--	--	1.6	--	13
	Feb/Mar 1999	--	20	0.5	--	--	--	1.8	--	14
	May/Jun 1999	--	20	0.5	--	--	--	1.6(EB)	--	15

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 35 of 46)**

Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-21	Aug 1999	--	17	0.5	--	--	--	1.7	--	12
Screen 1	Nov/Dec 1999	--	15	0.7	--	--	--	2.2(EB)	--	16
cont.	Mar/Apr 2000	--	17	0.7	--	--	--	1.8(EB)	--	12
	Jul/Aug 2000	--	12	0.5	--	--	--	1.7(EB)	--	16
	Jan/Feb 2001	--	9.8	0.5	--	--	--	1.6	--	11
	April 2001	--	3.3	0.6	0.7	--	--	1.2	--	--
	July 2001	--	15.5	0.8	--	--	--	1.5	--	8
	October 2001	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	17.5	0.6	0.4 J	--	--	1.7	--	--
	April/May 2002	--	8.3	0.8	--	--	--	1.7	--	--
	July 2002	--	12.0	0.6	0.4 J	--	--	1.4	--	7.7
	Oct/Nov 2002	--	11.3	0.4J	--	--	--	1.4	--	--
	Jan/Feb 2003	--	3.6	0.7	0.5	--	--	1.0	--	3.1
	April/May 2003	--	0.7	0.5 J	0.6	--	--	0.8	--	3.6 J
	July/Aug 2003	--	11.0	1.0	0.7	--	--	1.7	--	5.2
	Oct/Nov 2003	--	5.5	0.4 J	--	--	--	0.9	--	6.5
Screen 2	Aug/Sep 1996	--	0.9	--	--	--	--	0.5	--	(1)
	Oct/Nov 1996	--	0.6	2.3	--	--	--	0.6	1.4(TB) Acetone	(1)
	Feb/Mar 1997	--	--	1.1	--	--	--	--	--	(1)
	Jun/Jul 1997	--	--	0.7	--	--	--	--	--	--
	Sep/Oct 1997	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	1.1	--	--	--	--	--	--
	Apr/May 1998	--	--	--	1.0	--	--	--	--	--
	Jul/Aug 1998	--	--	--	0.7	--	--	0.7	--	--
	Oct/Nov 1998	--	--	--	--	--	--	0.7	--	--
	Feb/Mar 1999	--	--	0.8	--	--	--	--	--	--
	May/Jun 1999	--	--	0.6	--	--	--	--	--	--
	Aug 1999	--	--	0.8	--	--	--	--	--	--
	Nov/Dec 1999	--	--	1.2	--	--	--	--	--	4.6
	Mar/Apr 2000	--	--	0.9	--	--	--	--	1.8 Carbonyl Sulfide	4.1
	Jul/Aug 2000	--	--	0.9	--	--	--	--	--	--
	Jan/Feb 2001	--	0.3 J	1.2	--	--	--	0.4 J	--	--
	April 2001	--	0.3 J	0.9	--	--	--	--	--	--
	July 2001	--	--	0.9	--	--	--	--	--	--
	October 2001	--	--	0.6	--	--	--	0.4 J	--	--
	Jan/Feb 2002	--	--	1.9	--	--	--	0.5 J	0.6 J Methyl tertiary butyl ether	3.3 J
	April/May 2002	--	0.4 J	1.6	--	--	--	0.5 J	--	--
	July 2002	--	0.5	1.6	--	--	--	--	--	--
	Oct/Nov 2002	--	0.5	1.6	--	--	--	0.4 J	--	--
	Jan/Feb 2003	--	0.5	1.1	--	--	--	--	--	--
	April/May 2003	--	0.4 J	1.0	--	--	--	--	--	2.9 J
	July/Aug 2003	--	0.5 J	1.3	--	--	--	--	--	2.1 J
	Oct/Nov 2003	--	0.3 J	2.2	--	--	--	0.3 J	--	2.7 J

Screen 3	Aug/Sep 1996	--	0.7	1.5	--	--	--	0.5	--	(1)
	Oct/Nov 1996	--	0.9	1.6	--	--	--	--	1.2	Acetone
	Feb/Mar 1997	--	0.8	1.6	--	--	--	--	--	(1)
	Jun/Jul 1997	--	--	1.2	--	--	--	--	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 36 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-21	Sep/Oct 1997	--	0.6	1.3	--	--	--	--	--	--	--
Screen 3	Jan/Feb 1998	--	0.5	1.4	--	--	--	--	--	--	--
cont.	Apr/May 1998	--	--	1.1	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	0.9	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	0.8	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	1.0	--	--	--	--	--	4.1	--
	May/Jun 1999	--	0.6	1.4	--	--	--	--	--	--	--
	Aug 1999	--	0.6	1.3	--	--	--	--	--	--	--
	Nov/Dec 1999	--	0.9	2.2	--	--	--	0.6(EB)	4.9 Carbonyl Sulfide	4.8	--
	Mar/Apr 2000	--	0.9	2.3	--	--	--	0.6(EB)	--	--	--
	Jul/Aug 2000	--	0.6	1.5	--	--	--	0.7(EB)	--	--	--
	Jan/Feb 2001	--	0.9	2.5	--	--	0.5 J	--	1.1	0.3 J cis-1,2-Dichloroethene 0.6 Bromodichloromethane 0.4 J Chlorodibromomethane 0.3 J 1,2-Dichloroethene (Total)	--
	April 2001	--	1.8	1.4	--	--	--	--	0.8	--	--
	July 2001	--	0.7	1.8	--	--	--	--	0.8	1.0 Naphthalene	--
	October 2001	--	0.7	1.3	--	--	--	--	0.8	--	--
	Jan/Feb 2002	--	1.6	3.5	--	--	--	--	1.3	0.6 Bromodichloromethane 0.4 J cis-1,2-Dichloroethene 0.4 J Chlorodibromomethane 0.4 J trans-1,2-Dichloroethene	4.1
	April/May 2002	--	1.5	4.2	0.3 J	--	--	--	1.5	0.6 Bromodichloromethane 0.5 J cis-1,2-Dichloroethene 0.4 J trans-1,2-Dichloroethene	--
	July 2002	--	0.9	2.0	--	--	--	--	1.0	--	--
	Oct/Nov 2002	--	1.0	1.8	--	--	--	--	1.0	1.8 trans-1,2-Dichloroethene	--
	Jan/Feb 2003	--	1.1	1.9	--	--	--	--	0.9	0.3 J cis-1,2-Dichloroethene	--
	April/May 2003	--	1.0	2.1	--	--	--	--	0.8	--	2.9 J
	July/Aug 2003	--	1.0	1.8	--	--	--	0.5 J	0.4 J Chlorodibromomethane 0.4 J cis-1,2-Dichloroethene 0.4 J trans-1,2-Dichloroethene	2.7 J	
	Oct/Nov 2003	--	0.7	1.6	--	--	--	--	0.4 J	--	3.6 J
Screen 4	Aug/Sep 1996	--	0.8	4.2	--	--	--	--	--	--	(1)
	Oct/Nov 1996	--	--	2.5	--	--	--	--	--	--	(1)
	Feb/Mar 1997	--	--	1.8	--	--	--	--	--	--	4.6
	Jun/Jul 1997	--	--	2.8	--	--	--	--	--	--	7.7
	Sep/Oct 1997	--	0.6	4.4	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	2.4	--	--	--	--	--	--	--
	Apr/May 1998	--	0.6	4.4	--	--	--	--	--	0.7 cis-1,2-Dichloroethene	--
	Jul/Aug 1998	--	0.8	4.3	--	--	--	--	--	0.8 cis-1,2-Dichloroethene	4.3
	Oct/Nov 1998	--	1.1	8.3	--	--	--	--	0.6	1.3 cis-1,2-Dichloroethene	--
	Feb/Mar 1999	--	--	3.8	--	--	--	--	--	0.7 cis-1,2-Dichloroethene	--
	May/Jun 1999	--	--	3.2	--	--	--	--	--	0.6 cis-1,2-Dichloroethene	4.8

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 37 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-21 Screen 4	Nov/Dec 1999	--	0.6	6.0	--	--	--	--	--	5.1 Carbonyl Sulfide 1.1 cis-1,2-Dichloroethene	--
	Mar/Apr 2000	--	--	4.0	--	--	--	--	--	0.9 cis-1,2-Dichloroethene 0.7(EB)	--
cont.	Jul/Aug 2000	--	0.5	6.2	--	--	--	--	0.7	1.3 cis-1,2-Dichloroethene 1.0 cis-1,2-Dichloroethene 0.4 J Bromodichloromethane 1.0 J 1,2-Dichloroethene (Total)	--
	Jan/Feb 2001	--	1.2	4.3	--	--	--	--	--	0.4 J Bromodichloromethane 1.0 J 1,2-Dichloroethene	--
April 2001	--	--	3.8	--	--	--	--	--	1.0	0.7 cis-1,2-Dichloroethene 0.7 1,2-Dichloroethene (Total)	--
	July 2001	--	0.6	8.1	--	--	--	--	1.1	0.6 Bromodichloromethane 1.5 cis-1,2-Dichloroethene	--
October 2001	--	0.6	4.5	--	--	--	--	--	1.2	0.5 J Bromodichloromethane 1.1 1,2-Dichloroethene 0.6 J Methyl tertiary butyl ether	--
	Jan/Feb 2002	--	0.8	9.9	--	--	--	--	1.7	0.6 Bromodichloromethane 0.4 J Chlorodibromomethane 1.8 cis-1,2-Dichloroethene	2.7 J
April/May 2002	--	0.3 J	5.8	--	--	--	--	--	1.5	0.4 J Bromodichloromethane 0.7 cis-1,2-Dichloroethene	--
	July 2002	--	--	6.2	--	--	--	--	1.6	1.0 cis-1,2-Dichloroethene 0.4 J Bromodichloromethane 1.1 cis-1,2-Dichloroethene	--
Oct/Nov 2002	--	0.4 J	5.6	--	--	--	--	--	1.8	0.4 J Bromodichloromethane 1.0 cis-1,2-Dichloroethene 0.7 cis-1,2-Dichloroethene	--
	Jan/Feb 2003	--	0.3 J	5.2	--	--	--	--	1.7	0.7 cis-1,2-Dichloroethene 0.8 cis-1,2-Dichloroethene	--
April/May 2003	--	--	5.2	--	--	--	--	--	1.9	0.8 cis-1,2-Dichloroethene	2.1 J
	July/Aug 2003	--	1.0	15.4	--	--	--	--	3.2	0.5 Bromodichloromethane 0.7 Chlrodibromomethane 2.2 cis-1,2-Dichloroethane	2.7 J
Oct/Nov 2003	--	0.5 J	7.7	--	--	--	--	--	2.0	0.3 J Chlorodibromomethane 1.3 cis-1,2-Dichloroethane	3.4 J
	Screen 5 Aug/Sep 1996	--	--	4.5	--	--	--	--	0.6	--	(1)
Oct/Nov 1996	--	--	3.1	--	--	--	--	--	--	--	(1)
	Feb/Mar 1997	--	3.0	--	--	--	--	--	--	--	(1)
Jun/Jul 1997	--	3.0	--	--	--	--	--	--	--	--	--
	Sep/Oct 1997	--	2.9	--	--	--	--	--	--	--	--
Jan/Feb 1998	--	--	4.1	--	--	--	--	--	0.6 cis-1,2-Dichloroethene 5.0 Carbon Disulfide ⁽³⁾	5.2	
	Apr/May 1998	--	--	6.5	--	--	--	--	1.0 cis-1,2-Dichloroethene 1.5 cis-1,2-Dichloroethene	5.8	
Jul/Aug 1998	--	--	7.6	--	--	--	--	0.6	1.4 cis-1,2-Dichloroethene 1.4 cis-1,2-Dichloroethene 1.5 cis-1,2-Dichloroethene	--	
	Oct/Nov 1998	--	--	6.7	--	--	--	0.7	1.4 cis-1,2-Dichloroethene 0.7(EB) ⁽³⁾	4.0	
Feb/Mar 1999	--	0.5	7.7	--	--	--	--	--	1.5 cis-1,2-Dichloroethene	4.2	
	May/Jun 1999	--	--	8.2	--	--	--	0.8	1.6 cis-1,2-Dichloroethene 1.4 Chlorodifluoromethane	--	
Aug 1999	--	0.6	9.6	--	--	--	--	--	1.0(EB)	2.2 cis-1,2-Dichloroethene	4.9
	Nov/Dec 1999	--	0.7	11.4	--	--	--	--	--	--	--

Mar/Apr 2000	--	0.7	12	--	--	1.2(EB)
Jul/Aug 2000	--	0.6	11	--	--	1.2(EB)

4.2

2.5 cis-1,2-Dichloroethene

0.6 Bromodichloromethane

2.2 cis-1,2-Dichloroethene

0.6 Bromodichloromethane

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**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 38 of 46)**

Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-21	Jan/Feb 2001	--	0.7	15.1	--	--	--	--	1.7	2.6 cis-1,2-Dichloroethene 0.6 Bromodichloromethane 2.6 1,2-Dichloroethene (Total) 0.4 J Methyl tertiary butyl ether	--
Screen 5 cont.	April 2001	--	0.7	12.4	--	--	--	--	1.4	2.3 cis-1,2-Dichloroethene 2.3 1,2-Dichloroethene(Total)	--
	July 2001	--	0.6	11.6	--	--	--	--	1.4	0.6 Bromodichloromethane 2.0 cis-1,2-Dichloroethene 0.4 J Bromodichloromethane 1.61 J Dichloroethene 0.6 J Methyl tertiary butyl ether	--
	October 2001	--	0.5 J	7.8	--	--	--	--	1.5	0.4 J Bromodichloromethane 1.61 J Dichloroethene 0.6 J Methyl tertiary butyl ether	--
	Jan/Feb 2002	--	1.2	19.2	--	--	--	--	2.8	0.8 Bromodichloromethane 3.4 cis-1,2-Dichloroethene	4.6
	April/May 2002	--	1.3	28.6	0.4 J	--	--	--	3.4	0.7 Bromodichloromethane 3.3 cis-1,2-Dichloroethene	--
	July 2002	--	0.8	15.1	--	--	--	--	2.3	0.4 J Bromodichloromethane 2.4 cis-1,2-Dichloroethene	--
	Oct/Nov 2002	--	0.6	10.9	--	--	--	--	2.2	0.3 J Bromodichloromethane 2.1 cis-1,2-Dichloroethene	--
	Jan/Feb 2003	--	0.7	9.6	--	--	--	--	2.5	1.4 cis-1,2-Dichloroethene 1.7 cis-1,2-Dichloroethane	--
	April/May 2003	--	0.6	12.3	--	--	--	--	2.7	1.7 cis-1,2-Dichloroethane	2.7 J
	July/Aug 2003	--	1.0	20.2	--	--	--	--	3.6	2.5 cis-1,2-Dichloroethane	2.6 J
	Oct/Nov 2003	--	0.5 J	8.8	--	--	--	--	2.3	1.4 cis-1,2-Dichloroethane	2.6 J
MW-22^(s)											
Screen 1	Sep/Oct 1997	--	--	2.0	0.7	--	--	--	--	--	--
	Jan/Feb 1998	--	--	2.3	0.8	--	--	0.5	--	--	--
	Apr/May 1998	--	0.9	2.1	0.8	--	--	0.5	--	5.4	5.4
	Jul/Aug 1998	--	0.9	1.7	0.6	--	--	--	--	6.4	6.4
	Oct/Nov 1998	--	--	1.7	0.7	--	--	--	--	5.0	5.0
	Feb/Mar 1999	--	0.6	3.6	1.0	--	--	1.3 ⁽⁴⁾	0.5	6.4	6.4
	May/Jun 1999	--	--	2.7	1.0	--	--	--	--	4.9	4.9
	Aug 1999	--	--	2.1	0.7	--	--	--	--	--	--
	Nov/Dec 1999	--	--	3.6	0.9	--	--	--	0.5(EB)	4.2	4.2
	Mar/Apr 2000	--	--	3.1	0.7	--	--	--	--	4.3	4.3
	Jul/Aug 2000	--	--	3.2	0.6	--	--	--	--	4.4	4.4
	Jan/Feb 2001	--	--	2.0	0.7	--	--	--	0.4 J	--	--
	April 2001	--	--	4.0	0.5	--	--	--	0.4 J	--	--
	July 2001	--	--	1.9	0.3 J	--	--	--	0.3 J	--	--
	October 2001	--	--	1.9	--	--	--	--	--	--	--
	Jan/Feb 2002	--	--	2.3	0.4 J	--	--	--	--	--	--
	April/May 2002	--	0.4 J	2.7	0.6	--	--	--	0.5	--	--
	July 2002	--	--	2.9	0.6	--	--	--	0.6	--	--
	Oct/Nov 2002	--	--	2.2	0.4 J	--	--	--	0.4 J	--	--

Jan/Feb 2003	--	0.3 J	2.0	0.5 J	--	--	0.4 J	--	--
April/May 2003	--	--	--	--	--	--	--	3.0 J 4-Methyl-2-Pentanone	3.2 J
July/Aug 2003	--	0.3 J	2.0	0.5 J	--	--	0.4 J	0.4 J 4-Methyl-2-Pentanone	2.7 J
Oct/Nov 2003	--	--	0.9	--	--	--	--	--	2.2 J

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 39 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-22	Sep/Oct 1997	--	--	--	--	--	--	--	--	--
Screen 2	Jan/Feb 1998	--	--	--	--	--	--	--	0.8 Dichloromethane	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	4.9
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	0.6	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--
	April 2001	--	--	--	--	--	--	--	--	--
	July 2001	--	0.3 J	--	--	--	--	--	0.5 Toluene	--
	October 2001	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	0.3 J	--	--	--	--	--	--	--
	April/May 2002	--	--	--	--	--	--	--	--	--
	July 2002	--	--	--	--	--	--	--	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003 Duplicate	--	--	--	--	--	--	--	--	2.0 J
	April/May 2003	--	--	--	--	--	--	--	5.0 J 4-Methyl-2-Pentanone	1.6 J
	July/Aug 2003	--	--	--	--	--	--	--	0.6 J 4-Methyl-2-Pentanone	2.4 J
	July/Aug 2003	--	--	--	--	--	--	--	0.4 J 4-Methyl-2-Pentanone	2.1 J
	Oct/Nov 2003	--	--	--	--	--	--	--	--	2.4 J
Screen 3	Sep/Oct 1997	--	--	--	--	--	--	--	15	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	1.3(4)	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--
	April 2001	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	--	--	--	--	--	--	4.3	--
	April/May 2002	--	--	--	--	--	--	--	--	--

July 2002	--	--	--	--	--	--	--	--
Oct/Nov 2002	--	--	--	--	--	--	--	--
Jan/Feb 2003	--	--	--	--	--	--	--	--
April/May 2003	--	--	--	--	--	--	6.0 J 4-Methyl-2-Pentanone	1.8 J
July/Aug 2003	--	--	--	--	--	--	2.0 J 4-Methyl-2-Pentanone	2.2 J
							2.0 Chloroethane	
Oct/Nov 2003	--	--	--	--	--	--	--	2.6 J

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 40 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-22	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
Screen 4	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
	April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--
	April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	April/May 2003	--	--	--	--	--	--	--	--	9.0 J 4-Methyl-2-Pentanone	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	3.0 J 4-Methyl-2-Pentanone	--
										3.2 Chloroethane	
										1.0 Chloromethane	
Screen 5	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	1.3 ⁽⁴⁾	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
	April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--
	April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)
April/May 2003	--	--	--	--	--	--	5.0 J 4-Methyl-2-Pentanone
Oct/Nov 2003	--	--	--	--	--	--	2.0 J 4-Methyl-2-Pentanone
							--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 41 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location MW-23⁽⁸⁾	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
Screen 1	Sep/Oct 1997	--	3.1	0.6	0.8	--	--	--	--	--	4.4
	Jan/Feb 1998	--	4.2	1.6	1.2	--	--	--	0.9	0.6 1,2,3-Trichlorobenzene	5.2
	Apr/May 1998	0.5	16	0.8	1.2	--	--	--	1.9	--	16
	Jul/Aug 1998	0.5	9.2	--	--	--	--	--	1.0	2.2 Dichloromethane ⁽³⁾	19
	Oct/Nov 1998	0.8	15	--	--	--	--	--	1.9	--	21
	Feb/Mar 1999	0.6	15	1.1	1.4	--	--	--	1.9	0.06 1,2,3-Trichlorobenzene	8.4
	May/Jun 1999	--	7.0	1.1	--	--	--	0.6	1.0(EB)	0.7 1,2,3-Trichlorobenzene	7.6
	Aug 1999	--	3.5	1.1	1.0	--	--	--	1.0(EB)	--	--
	Nov/Dec 1999	--	1.2	1.3	1.0	--	--	--	0.5(EB)	1.1 1,2,3-Trichlorobenzene	4.1
	Mar/Apr 2000	--	1.5	2.3	1.3	--	--	--	0.7(EB)	1.2 1,2,3-Trichlorobenzene	4.3
	Jul/Aug 2000	--	1.4	0.9	--	--	0.6	--	0.5(EB)	--	4.9
	Jan/Feb 2001	--	0.9	1.6	0.9	--	--	--	0.5	--	--
	April 2001	--	0.7	--	0.5	--	--	--	0.5	--	--
	July 2001	0.6	1.9	0.9	0.4 J	--	--	--	--	--	--
	October 2001	--	0.5 J	--	--	--	--	--	--	--	--
	Jan/Feb 2002	--	1.3	1.4	0.7	--	--	--	0.5	--	--
	April/May 2002	--	0.9	1.1	0.4 J	--	--	--	0.6	--	--
	July 2002	--	0.9	1.0	0.4 J	--	--	--	0.6	--	--
	Oct/Nov 2002	--	0.7	0.8	0.4 J	--	--	--	0.5 J	--	--
	Jan/Feb 2003	--	1.5	1.0	--	--	--	--	0.5 J	--	1.9 J
	April/May 2003	--	1.0	0.8	--	--	--	--	0.5	4.0 J 4-Methyl-2-Pentanone	2.9 J
	July/Aug 2003	--	0.3 J	1.5	0.5	--	--	--	0.4 J	--	2.4 J
	Oct/Nov 2003	--	--	1.1	--	--	--	--	0.3 J	2.0 J 4-Methyl-2-Pentanone 2,7 Chloroethane	3.1 J
										0.6 Chloromethane	
Screen 2	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	7.6
	Jan/Feb 1998	--	--	--	--	--	--	--	0.7	--	6.7
	Apr/May 1998	--	--	--	--	--	--	--	--	--	7.5
	Jul/Aug 1998	--	1.1	1.0	0.8	--	--	--	0.7	1.8 Dichloromethane ⁽⁴⁾	7.8
	Oct/Nov 1998	--	0.6	0.7	0.6	--	--	--	0.6	--	16
	Feb/Mar 1999	--	--	--	0.5	--	--	--	0.5	--	7.7
	May/Jun 1999	--	--	--	0.5	--	--	--	0.6(EB)	--	7.8
	Aug 1999	--	--	--	--	--	--	--	0.5(EB)	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	7.5
	Mar/Apr 2000	--	--	0.6	--	--	--	--	0.6(EB)	--	7.2
	Jul/Aug 2000	--	--	0.7	--	--	--	--	0.7(EB)	--	6.6
	Jan/Feb 2001	--	0.4 J	0.4 J	--	--	--	--	0.4 J	--	4.0
	April 2001	--	0.4 J	--	--	--	--	--	0.5	--	--
	July 2001	--	0.3 J	0.6	--	--	--	--	--	1.2 1,2,3-Trichlorobenzene	--
	October 2001	--	--	0.5 J ⁽⁵⁾	--	--	--	--	0.4 J ⁽⁵⁾	--	--
	Jan/Feb 2002	--	1.1	0.5	--	--	--	--	0.5	--	4.0
	April/May 2002	--	0.7	0.7	0.3 J	--	--	--	0.6	--	--

			4.0 J
July 2002	--	0.8	0.6
Oct/Nov 2002	--	0.9	0.6
Jan/Feb 2003	--	0.7	0.6
April/May 2003	--	0.6	0.4 J
July/Aug 2003	--	0.6	0.6
Oct/Nov 2003	--	0.5	0.5 J

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 42 of 46)**

(concentrations in µg/L)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-23											
Screen 3	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	1,7 Dichloromethane ⁽⁴⁾	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	--	--	--	--	--	--	--	--	--	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
	April 2001	--	--	--	--	--	--	--	--	--	--
	July 2001	--	--	--	--	--	--	--	--	--	--
	October 2001	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2002	0.4 J ⁽⁵⁾	--	--	--	--	--	--	--	--	--
	April/May 2002	--	--	--	--	--	--	--	--	--	--
	July 2002	--	--	--	--	--	--	--	--	--	--
	Oct/Nov 2002	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2003	--	--	--	--	--	--	--	--	2.2 J	--
	April/May 2003	--	--	--	--	--	--	--	--	3.0 J 4-Methyl-2-Pentanone	--
	July/Aug 2003	--	--	--	--	--	--	--	--	2.0 J	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	2.0 J 4-Methyl-2-Pentanone 2,3 Chloroethane 0.6 Chloromethane	--
Screen 4	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	2,3 Dichloromethane ⁽⁴⁾	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
	April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Jan/Feb 2002	0.5 J	--	--	--	--	--	--	--	--	--
	April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--

July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)
April/May 2003	--	--	--	--	--	--	5.0 J 4-Methyl 2-Pentanone
Oct/Nov 2003	--	--	--	--	--	--	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 43 of 46)**
(concentrations in $\mu\text{g/L}$)

Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-23	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
Screen 5	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--
	Jul/Aug 1998	--	--	--	--	--	--	--	--	1,7 Dichloromethane ⁽⁴⁾	--
	Oct/Nov 1998	--	--	--	--	--	--	--	--	3.0 Unknown (RT=3.93)	--
	Feb/Mar 1999	--	--	--	--	--	--	--	--	3.1 2-Methyl-1-propene	17
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--
	Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--
	Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--
	Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--
	April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Jan/Feb 2002	--	0.6	--	--	--	--	--	--	--	--
	April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	--
	Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	April/May 2003	--	--	--	--	--	--	--	--	3.0 J 4-Methyl-2-Pentanone	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--
MW-24⁽⁸⁾	Sep/Oct 1997	5.0	5.0	--	--	--	--	0.6	3.1	--	92
	Jan/Feb 1998	30 E	15	0.5	--	0.8	--	0.6	15	--	330
	Apr/May 1998	6.7	5.4	--	--	--	--	--	3.3	--	74
	Jul/Aug 1998	--	1.7	--	--	--	--	--	0.9	--	20
	Oct/Nov 1998	1.0	1.3	--	--	--	--	--	0.8	--	16
	Feb/Mar 1999	1.0	1.5	--	--	--	--	--	0.8	--	14
	May/Jun 1999	1.0	1.6	--	--	--	--	--	0.6(EB)	--	14
	Aug 1999	1.8	3.6	--	--	--	--	--	1.3	--	22
	Nov/Dec 1999	6.3	5.3	--	--	--	--	--	2.5(EB)	--	91
	Mar/Apr 2000	15	8.6	0.6	--	--	--	0.6	5.1(EB)	--	270
	Jul/Aug 2000	18	7.7	0.9	--	--	--	--	4.5(EB)	--	440
	Jan/Feb 2001	12.1	5.5	0.6	--	0.4 J	0.4 J	1.5	7.5	3.62 1,4-Dioxane	1100
	April 2001	12.6	6.5	--	--	0.4 J	--	--	6.0	--	430
	July 2001	6.5	2.9	0.3 J	--	--	--	--	2.5	--	440
	October 2001	13.8	5.5	0.6	--	--	0.5	--	3.8	--	673 J
	Jan/Feb 2002	24.2	7.6	1.5	--	0.5 J	0.7	--	9.3	3 1,4-Dioxane	1,460
	April/May 2002	26.0	6.8	1.6	--	--	0.8	--	9.3	--	1,280

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 44 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride							Other Volatile Organic Compounds (including 1,4-Dioxane)				Perchlorate
		PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	9,3	--	1,230 J	985	--	
MW-24	July 2002	21.6	5.9	1.3	--	0.7	--	13.4	--	257	854	--	
Screen 1	Oct/Nov 2002	22.2	8.3	1.2	--	0.4 J	1.0	--	2.4	--	2450	2450	
cont.	Jan/Feb 2003	4.7	1.7	0.5 J	--	--	--	5.2	4.0 J 4-Methyl-2-Pentanone				
	April/May 2003	7.5	2.9	0.4 J	--	--	--	10.2	0.3 J 4-Methyl-2-Pentanone				
	July/Aug 2003	22.1	4.8	1.5	--	--	0.8	--	0.4 J Methylene Chloride				
	Oct/Nov 2003	19.1	3.7	1.6	--	--	0.7	--	6.8	--	2760 J	2760 J	
Screen 2	Sep/Oct 1997	13	1.3	--	--	--	--	3.8	--	200	200		
	Jan/Feb 1998	6.9	0.7	--	--	--	--	2.4	--	110	110		
	Apr/May 1998	29	3.3	0.9	--	--	1.4	--	9.4	--	480	480	
	Jul/Aug 1998	58	4.0	1.5	--	--	2.0	--	8.4	--	500	500	
	Oct/Nov 1998	19	2.3	0.8	--	--	0.8	--	5.9	--	490	490	
	Feb/Mar 1999	30 E	3.0	1.0	--	--	1.5	--	6.6	--	580	580	
	May/Jun 1999	33	4.3	1.3	--	--	1.8	--	7.7(EB)	--	690	690	
	Aug 1999	35	3.6	0.9	--	--	1.4	--	7.5	--	700	700	
	Nov/Dec 1999	25	3.7	0.9	--	--	1.4	--	7.4(EB)	--	570	570	
	Mar/Apr 2000	28	4.3	1.1	--	--	1.9	--	8.0(EB)	--	570	570	
	Jul/Aug 2000	23 E	3.3	0.8	--	--	1.2	--	7.7(EB)	--	530	530	
	Jan/Feb 2001	0.5 J	--	0.5 J	--	--	--	--	--	--	42	42	
	April 2001	10.6	2.0	--	--	0.4 J	0.6	--	6.2	--	430	430	
	July 2001	15.2	2.4	0.5	--	0.4 J	0.8	--	6.4	--	420	420	
	October 2001	8.6	0.9	--	--	--	0.9	--	3.5	--	386 J	386 J	
	Jan/Feb 2002	0.4 J	--	--	--	--	--	--	--	--	11.6	11.6	
	April/May 2002	10.8	1.6	0.5 J	--	--	0.6	--	4.3	--	249	249	
	July 2002	10.6	1.7	--	--	--	0.7	--	4.6	--	246 J	246 J	
	Oct/Nov 2002	--	0.4 J	0.4 J	--	--	--	--	--	--	--	--	
	Jan/Feb 2003	8.9	1.3	--	--	0.5 J	--	2.8	--	106	106		
	April/May 2003	8.9	1.6	0.3 J	--	0.5	--	3.8	4.0 J 4-Methyl-2-Pentanone		195	195	
	April/May 2004	4.1	0.8	--	--	--	--	2.3	5.0 J 4-Methyl-2-Pentanone		199	199	
	Duplicate 2003	--	--	--	--	--	--	--	2.5 Methylene Chloride				
	July/Aug 2003	4.7	0.8	--	--	--	--	2.4	0.3 J Methylene Chloride		148	148	
	Oct/Nov 2003	3.4	0.6	--	--	--	--	1.4	--	155 J	155 J	155 J	
Screen 3	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--	--	
	Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--	--	
	Apr/May 1998	--	--	--	--	--	--	--	--	--	--	--	
	Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--	--	
	Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--	--	
	Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--	--	
	May/Jun 1999	--	--	--	--	--	--	--	--	--	--	--	
	Aug 1999	--	--	--	--	--	--	--	--	--	--	--	
	Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--	--	
	Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--	--	

	Jul/Aug 2000	--
	Jan/Feb 2001	--
	April 2001	--
	July 2001	--
	October 2001	--
	Jan/Feb 2002	--
	April/May 2002	--

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 45 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	1,1-DCE	Freon113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-24	July 2002	--	--	--	--	--	--	--	--	--	--
Screen 3 cont.	Oct/Nov 2002	--	--	--	--	--	--	--	--	0.6 J Methyl-Tertiary Butyl Ether	--
Jan/Feb 2003	--	--	--	--	--	--	--	--	--	1.6	--
April/May 2003	--	--	--	--	--	--	--	--	--	--	--
July/Aug 2003	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--	--
Screen 4	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--	--
April/May 1998	--	--	--	--	--	--	--	--	--	--	--
Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--	--
Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--	--
May/Jun 1999	--	--	--	--	--	--	--	--	--	--	--
Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--	--
Mar/Apr 2000	--	--	--	--	--	--	--	--	--	--	(2)
Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--	--
April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jan/Feb 2002	--	--	--	--	--	--	--	--	--	--	--
April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
April/May 2003	--	--	--	--	--	--	--	--	--	5.0 J 4-Methyl-2-Pentanone	--
July/Aug 2003	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 2003	--	--	--	--	--	--	--	--	--	--	--
Screen 5	Sep/Oct 1997	--	--	--	--	--	--	--	--	--	--
Jan/Feb 1998	--	--	--	--	--	--	--	--	--	--	--
April/May 1998	--	--	--	--	--	--	--	--	--	--	--
Jul/Aug 1998	--	--	--	--	--	--	--	--	--	--	--
Oct/Nov 1998	--	--	--	--	--	--	--	--	--	--	--
Feb/Mar 1999	--	--	--	--	--	--	--	--	--	--	--
May/Jun 1999	--	--	--	--	--	--	--	--	--	--	--
Aug 1999	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Nov/Dec 1999	--	--	--	--	--	--	--	--	--	--	--
Mar/Apr 2000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Jul/Aug 2000	--	--	--	--	--	--	--	--	--	--	--
Jan/Feb 2001	--	--	--	--	--	--	--	--	--	--	--
April 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
July 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

	October 2001	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Jan/Feb 2002	--	--	--	--	--	--	--	--
	April/May 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

**Table B-2. Summary of Volatile Organic Compounds and Perchlorate Detected During the JPL Monitoring Program,
Jet Propulsion Laboratory (page 46 of 46)**

(concentrations in $\mu\text{g/L}$)
Values above State or Federal MCLs, or above/equal to action levels, are bold and shaded

Sampling Location	Sampling Event	Carbon Tetrachloride	TCE	PCE	1,1-DCA	1,2-DCA	Freon 113	Chloroform	Other Volatile Organic Compounds (including 1,4-Dioxane)	Perchlorate
MW-24	July 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Screen 5	Oct/Nov 2002	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
cont.	Jan/Feb 2003	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	April/May 2003	--	--	--	--	--	--	--	5.0 J 4-Methyl-2-Pentanone	--
	Oct/Nov 2003	--	--	--	--	--	--	--	--	--
Practical Quantitation Limit		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5 Bromodichloromethane 0.5 Chlorodibromomethane 0.5 Dichloromethane 0.5 cis-1,2-Dichloroethene 0.5 Ethylbenzene 1.0 Methylene Chloride 1.0 Trichlorofluoromethane (Freon 11) 3 1,4-Dioxane	4.0
California Maximum Contaminant Level		0.5	5.0	5.0	0.5	6.0	1,200	100	150 Trichlorofluoromethane (Freon 11) 6.0 cis-1,2-Dichloroethene ⁽⁹⁾	NE ⁽¹⁰⁾
EPA Region IX Maximum Contaminant Level		5.0	5.0	NE	5.0	7.0	NE	100	5.0 Dichloromethane ⁽⁹⁾ 70 cis-1,2-Dichloroethene ⁽⁹⁾ 100 Bromodichloromethane ⁽⁹⁾	NE

- : Not detected.
- B: Compound detected in laboratory method blank.
- EB: Compound detected in associated equipment blank.
- RT: Retention time.
- TB: Compound detected in associated trip blank.
- FB: Compound detected in associated field blank.
- E: Estimated concentration; result exceeded calibration range.
- NE: Not established.
- J: Indicated an estimated Value.
- *: Results are from pilot study, most recent data used.
- 1: Perchlorate not part of monitoring program.
- 2: Monitoring point not sampled for the particular constituent due to changes in the sampling program agreed to by the EPA, DTSC, and RWQCB.
- 3: Suspected by the laboratory to have resulted from carry over in analysis (see January/February 1998 report).
- 4: Attributed to laboratory contamination.
- 5: Results from duplicate analysis; reported as being higher than the regular sample.
- 6: Not sampled, no water over Screen .
- 7: Not sampled due to mechanical failure.
- 8: Wells installed June-August 1997.
- 9: Only VOCs for which MCLs have been established are listed.
- 10: The California Department of Health Services Drinking Water Action Level for Perchlorate is 4 micrograms per liter.

Appendix C
Environmental Database Review

Appendix C

Environmental Database Review

An electronic environmental database search was completed to identify potential chemical sources and Chemicals. The search was completed using reasonably ascertainable environmental databases, including standard State and Federal sources in accordance with the American Society of Testing Materials (ASTM) Standard Practice E1527-00. A 1-mile radius, that includes the capture zone areas for Arroyo Well and Well 52, was used as the maximum search distance. Within the 1-mile radius area (herein referred to as the study area), the approximate minimum search distances as presented in ASTM 1527-00 were used. The ASTM list of records, including the approximate minimum search distances and the resulting number of sites identified within the ASTM search distance are provided in Table B-1 below. The acronyms for the record sources are defined in the following text.

TABLE C-1
Standard Environmental Records Sources

Record Sources	Approximate Minimum Search Distance (miles)	Number of Sites Identified
<i>Federal ASTM Standard</i>		
National Priority List	1	1
CERCLIS	1	3
RCRIS-LQG	1	1
RCRIS-SQG	1	7
ERNS	1	2
<i>State ASTM Standard</i>		
AWP	1	1
Cal-Sites	1	1
CHMIRS	1	3
CORTESE	1	7
State Landfill	2	2
WMUDS/SWAT	1	1
LUST	1	7
UST	1	3
CA FID UST	1	5
HIST UST	1	9
<i>ASTM Supplemental</i>		
FINDS Facility Index System	1	11

TABLE C-1 (Continued)
Standard Environmental Records Sources

Record Sources	Approximate Minimum Search Distance (miles)	Number of Sites Identified
Cleaners	1	4
CA WDS	1	2
CA SLIC	1	2
HAZNET	1	26
LA County HMS	1	26

The following paragraphs provide a brief description of each database for which at least one site was identified. A summary of the Federal database, and state and local database search results are presented in Tables B-2 and B-3, respectively. Figure 5-1 shows the locations of the identified sites.

FEDERAL ASTM STANDARD

CERCLIS: Comprehensive Environmental Response, Compensation and Liability Information System. The database contains data on potentially hazardous waste sites that have been reported by states to the United States Environmental Protection Agency (EPA). The sites include municipalities, private companies and persons, pursuant to Section 103 of the CERCLA. The CERCLIS database contains sites which are proposed or on the NPL. Additionally, the database lists sites that are in the screening and assessment phase for possible inclusion on the NPL. A review of the CERCLIS database identified three CERCLIS sites located within the 1-mile radius study area; one of the three sites is the Jet Propulsion Laboratory (JPL) facility.

RCRIS: Resource Conservation and Recovery Information System. The database includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). The database is maintained by the EPA and is divided into two categories based on the volume of hazardous waste generated on a monthly or annual basis. The two categories include the following:

- × LQG – Large quantity generator
- × SQG – Small quantity generator

A review of the RCRIS database identified one LQGs and seven SQGs located within the 1-mile radius study area.

ERNS: Emergency Response Notification System. The database records and stores information on reported releases of oil and hazardous substances. The database is maintained by the EPA. A review of the ERNS database identified two ERNS sites located within the 1-mile radius study area.

FEDERAL ASTM SUPPLEMENTAL

FINDS: Facility Index System. The database contains both facility information and "pointers" to other sources of information that contain detailed information on the following sources:

- RCRIS; Permit Compliance System (PCS)
- Aerometric Information Retrieval System (AIRS)
- FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and Toxic Substance Control Act (TSCA) Enforcement System, FTTS [FIFRA/TSCA Tracking System]
- CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes)
- Federal Underground Injection Control (FURS)
- Federal Reporting Data System (FRDS)
- Surface Impoundments (SIA)
- TSCA Chemicals in Commerce Information System (CICS);
- Polychlorinated biphenyls(PCBs) Activity Database System (PADS)
- RCRA-J (medical waste transporters/disposers)
- Toxic Release Inventory System (TRIS)
- TSCA

The database is maintained by the EPA as part of the National Technical Information System (NTIS). A review of the database identified ten FINDS sites located within the 1-mile radius study area.

STATE ASTM STANDARD

CHMIRS: California Hazardous Material Incident Report System. The database contains information on reported hazardous material incidents such as accidental releases or spills. The database is maintained by the State of California Office of Emergency Services (OES). A review of the CHMIRS database identified two CHMIRS sites located within the 1-mile radius study area.

CORTESE: “Cortese” Hazardous Waste & Substances Sites List. The database stores public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with underground storage tanks (USTs) having a reportable release, and all solid waste disposal facilities from which there is known migration. The database is maintained by the California Environmental Protection Agency (CAL-EPA) Office of Emergency Information. A review of the CORTESE database identified six CORTESE sites located within the 1-mile radius study area.

SWF/LF: Solid Waste Facilities/Landfill Facilities. The database typically contains an inventory of solid waste disposal facilities or landfills located in a particular state. In California, the database is maintained by the State Integrated Waste Management Board as part of the Solid Waste Information System (SWIS) database. A review of the SWF/LF database identified one SWF/LF site located within the 1-mile radius study area.

WMUDS/SWAT: Waste Management Unit Database/Solid Waste Assessment Test. The database is used for tracking and inventory of waste management units; the database is maintained by the State Water Resources Control Board (SWRCB) of California. A review of the WMUDS/SWAT database, identified one WMUDS/SWAT site located within the 1-mile radius study area.

LUST: Leaking Underground Storage Tank. The database contains an inventory of reported LUST incidents; the database is maintained by SWRCB of California as part of the

LUST System. A review of the LUST database identified eight LUST sites located within the 1-mile radius study area.

UST: Underground Storage Tank. The database contains registered USTs, which are regulated under Subtitle I of RCRA. Data is provided by the SWRCB of California Hazardous Substance Storage Container Database. A review of the UST database identified two UST sites located within the 1-mile radius study area.

CA FID: California Facility Inventory Database. The database contains active and inactive UST locations; the database is maintained by SWRCB of California. A review of the California Facility Inventory Databases (CA FID) database identified four CA FID sites located within the 1-mile radius study area.

HIST UST: Historical UST Registered Database. The database contains historical information on registered USTs in the State of California. The database is maintained by SWRCB of California. A review of the historical (HIST) UST database identified seven HIST UST sites located within the 1-mile radius study area.

STATE OR LOCAL ASTM SUPPLEMENTAL

DRY CLEANERS: The database is proprietary and contains a list of dry cleaner-related facilities that have EPA ID numbers with certain Standard Industrial Classification (SIC) code designations. These facilities include the following:

- ✗ Family and commercially owned power laundries
- ✗ Garment pressing and cleaners' agents
- ✗ Linen supply houses
- ✗ Coin-operated laundries
- ✗ Dry cleaning plants except rugs
- ✗ Carpet and upholster cleaning
- ✗ Industrial cleaners
- ✗ Laundry and garment services

WDS: Waste Discharge System. The database is maintained by the SWRCB of California and contains information on sites with waste discharge permits issued by the State of California. A review of the WDS list identified two WDS sites located within the 1-mile radius study area.

SLIC: Spills, Leaks, Investigations, and Cleanup Site. The database is maintained by the SWRCB of California and contains information on SLIC sites registered with the SWRCB. A review of the database identified one SLIC site within the 1-mile radius study area.

HAZNET: Hazardous Waste Information System. Data is extracted from copies of hazardous waste manifests received each year by the Department of Toxic Substance Control (DTSC) of California. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests and continuation sheets are not included. Some of the data may contain inaccurate information such as generator identification (ID) number, TSD ID number, waste category, and disposal method. The database is maintained by the DTSC and a review of the database identified 25 HAZNET sites located within the 1-mile radius study area.

HMS: Hazardous Materials System - Los Angeles County Industrial Waste and Underground Storage Tank Sites. The database is maintained by Los Angeles County and contains information about industrial waste and UST sites located and registered with Los Angeles County. A review of the database identified 25 HMS sites located within the 1-mile radius study area.

In addition to the aforementioned databases, additional databases were searched, but no sites were identified during the search of available records within the ASTM search radius within the study area. These additional databases include the following:

x Federal ASTM Standard

Proposed NPL - Proposed National Priority List Sites
CERC-NFRAP CERCLIS - No Further Remedial Action Planned
CORRACTS - Corrective Action Report
RCRIS-TSD - Resource Conservation and Recovery Information System – Treatment Storage and Disposal

x Federal ASTM Supplemental

CONSENT Superfund (CERCLA) Consent Decrees
ROD - Records Of Decision
Delisted NPL National Priority List Deletions
HMIRS - Hazardous Materials Information Reporting System
MLTS - Material Licensing Tracking System
MINES - Mines Master Index File
NPL Liens Federal Superfund Liens
PADS - PCB Activity Database System
NPL Liens Federal Superfund Liens
RAATS - RCRA Administrative Action Tracking System
TRIS - Toxic Chemical Release Inventory System
TSCA - Toxic Substances Control Act
FTTS FIFRA Tracking System - Federal Insecticide, Fungicide, & Rodenticide Act

x State ASTM Standard

Notify 65 Proposition 65 Records
Toxic Pits Toxic Pits Cleanup Act Sites
California Bond Expenditure Plan

x State or Local ASTM Supplemental

AST Aboveground Petroleum Storage Tank Facilities
DEED List of Deed Restrictions
LA Co. Site Mitigation Site Mitigation List
AOCONCERN San Gabriel Valley Areas of Concern
Vendor Proprietary Historical Databases

TABLE C-2
Federal Database Search Results for Known Sources

Facility Name	Map ID	Address	Federal Databases					
			CERCLIS	RCRIS LQG	RCRIS SQG	ERNS	FINDS	NPL
Bow Tie Cleaners	I 45	458 Foothill Boulevard	9					9
Crystal Cleaners	I 46	446 Foothill Boulevard		9				9
Flintridge Preparatory	D 20, D 21	4543 Crown Avenue				9		9
Foothill Volkswagen	I 49	475 Foothill Boulevard		9				9
G.T. Equipment	22	4911 Crown Avenue		9				9
Independent Mercedes	H 41, H 42, H 61	440 Foothill Boulevard		9				9
Lincoln Avenue Water Company	M 68, M 70, M 71	564 West Harriet Street				9		9
Name Not Reported	O 77, O 83	550 Foothill Boulevard				9		9
Name Not Reported	32	4463 Oak Grove Drive				9		9
JPL	A	4800 Oak Grove Drive	9	9			9	9
Pacific Bell	B 10, B 11, B 12	4815 Oak Grove Avenue		9			9	9
Palace Cleaners	L 65, L 66, L 67	510 ½ Foothill Boulevard	9					9
RITE Cleaners	58	3053 N. Lincoln				9		9
Saint Francis High School	C 15, C 16, C 19	200 Foothill Boulevard					9	9

CERCLIS = Comprehensive Environmental Response, Compensation, and Liability Information System

RCRIS = Resource Conservation and Recovery Information System

LQG = Large Quantity Generator

SQG = Small Quantity Generator

ERNS = Emergency Response Notification System

FINDS = Facility Index System

NPL = National Priority List

TABLE C-3
State and Local Databases Search Results for Known Sources

Facility Name	Map ID	Address	State and Local Databases											
			CHMIRS	CORTESE	SWFLF	WMUDS/SWAT	LUST	UST	HIST UST	CA FID	DRY CLEANERS	WDS	CA SLIC	HAZNET
ARCO Products Company	O 76, O 78, O 79, O 80, O 81, O 82, O 84	550 Foothill Boulevard					9	9	9	9		9	9	9
ARCO Products #80900	K 54, K55, K56	3081 North Lincoln Avenue												99
Arnold B. Cotton	38	582 Meadow Grove Place												9
Arroyo Substation	A	4800 Oak Grove Road												9
Bow Tie Cleaners	I 45	458 Foothill Boulevard												9
Clifford Bevers	72	636 Royce Street												9
Crystal Cleaners	I 46	446 Foothill Boulevard												9
Five Acres/Boys & Girls AIDS School	G 35, G 36	760 West Mountain View Street												9
Flintridge Preparatory School	D 20, D 21	4543 Crown Avenue												9
Flintridge Riding Club	E 24, E 25, E 26, E 27	4625 Oak Grove Drive					9		9	9				9
Foothill Volkswagen	I 49	475 Foothill Boulevard												9
Frank McHugh	39	665 West Altadena Drive												9
Georges Drive-in Liquor & Deli	K 60	3061 North Lincoln Avenue												9
Goodyear Auto Service Center	37	420 Foothill Boulevard												9
Independent Mercedes	H 41, H 42, H 61	440 Foothill Boulevard												9
Knight Way School	59	405 West Knight Way												9
La Canada Tire	I 44	459 Foothill Boulevard												9
La Canada High School	85	4463 Oak Grove Drive												9
La Canada Wastewater Plant	J 50, J 51	533 Meadow View Drive												9
Lincoln Avenue Water Company	M 68, M 70, M 71	564 West Harriet Street												9
Loma Alta Company Park	57	3330 North Lincoln Avenue												9
Los Angeles County Fire Camp 2	B 13	4845 Oak Grove Avenue												9
Los Angeles County Fire Station #82	31, 40	352 Foothill Boulevard												9
Los Angeles County Road Department	F 34	3900 Canyon Crest Road												9
Los Gringos Locos, LLC	I 48	464 West Foothill Boulevard												9
Millard Canyon Dump	F 33	3900 Canyon Crest Road												9
Name Not Reported	O 77, O 83	550 Foothill Boulevard						9	9					

TABLE C-3 (Continued)
State and Local Databases Search Results for Known Sources

Facility Name	Map ID	Address	State and Local Databases											
			CHMIRS	CORTESE	SWFLF	WMUDS/SWAT	LUST	UST	HIST UST	CA FID	DRY CLEANERS	WDS	CA SLIC	HAZNET
Name Not Reported	32	4463 Oak Grove Drive	9					9	9	9	9	9	9	9
JPL	A	4800 Oak Grove Drive	9	9	9			9	9	9	9	9	9	9
Pacific Bell	B 10, B 11, B 12	4815 Oak Grove Avenue	9					9	9	9	9	9	9	9
Palace Cleaners	L 65, L 66, L 67	510 1/2 foothill Boulevard									99		9	9
Pasadena Children's Training School	23	2933 North El Nido											9	9
Pasadena Unified School District	30	725 West Altadena Drive											9	9
Ralphs Grocery Company #55	N 73, N 74	5211 West Foothill Boulevard											9	9
Reclamation Plant District 28	J 50, J 51	533 Meadow View Drive											9	9
RITE Cleaners	58	3055 North Lincoln											9	9
Saint Francis High School	C 15, C 16, C 19	2001 Foothill Boulevard											9	9
Saint Bede Church	O 17	215 Foothill Boulevard											9	9
South Coulter Water Treatment	M 69	564 West Harriet Street											9	9
Southern California Edison	A	4800 Oak Grove Drive											9	9
Szkiba Auto (Former)	K 52, K 53	3081 Lincoln Boulevard North											9	9
Truemark Property Management	L 64	502 West Foothill Boulevard											9	9
Oak Grove Ranger Station	28	4600 Oak Grove Drive											9	9
Oak Grove Work Center	O 18	Oak Grove Park											9	9
United States Department of Agriculture – Forest/Oak Grove Station	43	4550 Oak Grove Drive											9	9
UNOCAL Corp Service Station	K 62	587 West Altadena Drive											9	9
USDA Forest Service, Oak Grove	O 14	Oak Grove Drive North											9	9
William Barber	75	511 Houseman Street											9	9
1X Donald L. Sheppard	47	400 Georgian											9	9
CHMIRS = California Hazardous Material Incident Report System														
CORTESE = Cortese Hazardous Wastes and Substances														
SWFLF = Solid Waste Facilities/Landfill Facilities														
WMUDS/SWAT = Waste Management Unit Database System/Solid Waste Assessment Test														
LUST = Leaking Underground Storage Tank														
UST = Underground Storage Tank														

HIST UST = Historical Underground Storage Tank
 CA FID = California Facility Inventory Database
 WDS = Waste Discharge System
 CA SLIC = California spills, leaks, investigations, and cleanup sites
 HAZNET = Hazardous Waste Manifest
 LA COUNTY HMS = Los Angeles County Hazardous Materials System

Appendix D
Millard Canyon Dump Closed Site Assessment Form

CLOSED SITE ASSESSMENT FORM

Site Name: MILLARD CANYON DUMP	AKA: LA Co Road Department	SWIS #/CLASS: 19-AA-5154, Inert
Current Address: (Include County) 3900 Canyon Crest Road, Alta Dena, LA County		
Other Addresses: (Include County) None		
Location: (Include Site Location Quad Map) Rm 535, F.3		
Township, Range, Section and Parcel #: Assessor's map 5863-6-901; TG 19E,		
Operator(s): LA County Road Dept.		
Current Land Owner(s):	Address:	Phone:
Disposal Area: (acres) Unknown	Depth of Fill: Unknown	Site Boundary: (acres) Unknown
Type of Waste: Inert	Type of Site: Landfill	Cover Information: None
SWFP DATE: None	Dates of Operation: 1969-4/72	Tonnage: Unknown
WDR Date: None	Date Site Closed: 1972	Closure Approved By: Unknown
Maps, Boring Logs, Special Structural Drawings, and Other Technical Documents: None		
Land use on or within 1000 ft of waste boundary:		
Land use on or within 1 mile of waste boundary:		
Present Use(s):		
Surface Condition:	Landfill Gas Migration:	Leachate Migration:
Other Observations: Only the North side of Millard Canyon was used to fill with inert material; there was a request for a permit to use as dump in 1960, but was withdrawn in 1/30/62.		
RECOMMENDATION:		
D PRIORITY; SOLID FILL WAS DUMPED TO RESTORE AREA WASHED AWAY BY THE RAINSTORM.		
Source of Information: LA County Public Works Department		
Pictures:	Taken By:	F. Marasa, REHS III
Date: 10/13/95, VSM	Prepared By:	V. Maloles, REHS III

Appendix E
Regulatory Assessment

Appendix E

Regulatory Assessment

Title 22 Drinking Water Regulated and Unregulated Chemicals

Details regarding water quality and monitoring regulations for domestic water supplies are provided in CCR, Title 22, Chapter 15. Based on these regulations, primary and secondary MCLs are established for a number of chemicals (see Appendix E1). MCLs are enforceable regulatory levels and must be met by all public drinking water systems to which they apply. In addition, Title 22 lists a number of unregulated chemicals that are, or may be, required to be monitored when the source water is considered to be vulnerable (see Appendix E2).

Action Levels

ALs are health-based, non-enforceable drinking water levels published by the DHS Office of Drinking Water and are advisory to water suppliers. ALs are concentrations at which DHS urges water purveyors to take corrective action in order to reduce the concentrations of a particular constituent in the drinking water supply. The list of chemicals with ALs is presented in Appendix E3. If an AL is exceeded, the drinking water system is required to notify the governing body of the local agency in which users of the drinking water reside (i.e., city council) and recommends that the community be informed. A water source is removed from service if chemicals are present at 10 times the AL for noncancer causing agents and at 100 times the AL for cancer causing agents.

Public Health Goals

PHGs are levels of chemicals in drinking water that are protective of human health. These are adopted by the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA) and are based on human health risk assessments. DHS is required by California's Health and Safety Code Section 116365(h) to establish the PHG. A PHG is based on risk assessment, and does not consider other risk management aspects such as chemical detectability and treatment. OEHHA is required to establish PHGs for chemicals that have MCLs and to review them periodically. PHGs are also established for chemicals for which MCLs are yet to be adopted by DHS. The list of PHGs is presented in Appendix E4.

Safe Drinking Water and Toxic Enforcement Act of 1986

The Proposition 65 List for workplace hazardous chemicals was established under the California Safe Drinking Water and Toxic Enforcement Act of 1986 for known human carcinogens and reproductive toxins. Proposition 65 requires the Governor to publish a list of chemicals that are known to the State of California to cause cancer, birth defects, or other reproductive harm. Proposition 65 made it illegal to expose persons to significant amounts of these chemicals without prior notification. The list contains a wide range of chemicals that may be naturally occurring or synthetic. Some of them are ingredients of common household products, while others are specialty chemicals used in

very specific industrial applications that are not likely to threaten groundwater. The Proposition 65 List of chemicals is presented in Appendix E5.

Proposition 65 has notification requirements for products containing listed chemicals and for discharges above no significant risk levels; however, it has no regulatory requirements. Many of the constituents or substances on the Proposition 65 List are not found in water or drinking water, and there is no reason to test for them in drinking water. A majority of chemicals on the Proposition 65 List do not have analytical methods for drinking water.

Appendix E1
State of California Maximum Contaminant Levels

May 16, 2003

*Includes MCL changes effective June 12, 2003
(<http://www.dhs.ca.gov/ps/ddwem/publications/regulations/MCLrevisions6-12-03.pdf>)*

NOTE: This extract from Title 22 of the California Code of Regulations is prepared as an aid to staff of the DHS Drinking Water Program and cannot be relied upon by the regulated community as the State of California's representation of the law. The published codes are the only official representation of the law.

TITLE 22, CALIFORNIA CODE OF REGULATIONS

DIVISION 4. ENVIRONMENTAL HEALTH

CHAPTER 15. DOMESTIC WATER QUALITY AND MONITORING

ARTICLE 4. PRIMARY STANDARDS—INORGANIC CHEMICALS

Section 64431. Maximum contaminant levels - inorganic chemicals

Table 64431-A

Maximum Contaminant Levels
Inorganic Chemicals

<i>Chemical</i>	<i>Maximum Contaminant Level, mg/L</i>
Aluminum	1.
Antimony	0.006
Arsenic	0.05
Asbestos	7 MFL*
Barium	1.
Beryllium	0.004
Cadmium	0.005
Chromium	0.05
Cyanide	0.15
Fluoride	2.
Mercury	0.002
Nickel	0.1
Nitrate (as NO ₃)	45.
Nitrate + Nitrite (sum as nitrogen)	10.
Nitrite (as nitrogen)	1.
Selenium	0.05
Thallium	0.002

*MFL = million fibers per liter; MCL for fibers exceeding 10 um in length.

Article 4.1. FLUORIDATION

Section 64433.2. Optimal fluoride levels

Table 64433.2-A
Optimal Fluoride Levels

<i>Annual average of maximum daily air temperatures, degrees</i>		<i>Optimal fluoride level, mg/L</i>	<i>Control Range, mg/L</i>	
Fahrenheit	Celsius		Low	High
50.0 to 53.7	10.0 to 12.0	1.2	1.1	1.7
53.8 to 58.3	12.1 to 14.6	1.1	1.0	1.6
58.4 to 63.8	14.7 to 17.7	1.0	0.9	1.5
63.9 to 70.6	17.8 to 21.4	0.9	0.8	1.4
70.7 to 79.2	21.5 to 26.2	0.8	0.7	1.3
79.3 to 90.5	26.3 to 32.5	0.7	0.6	1.2

ARTICLE 5. RADIOACTIVITY

Section 64441. Natural radioactivity

Section 64443. Man-made radioactivity

Table 4
MCL Radioactivity

<i>Constituent</i>	<i>Maximum Contaminant Level, pCi/l</i>
Combined Radium-226 and Radium-228	5
Gross Alpha particle activity (including Radium-226 but excluding Radon and Uranium)	15
Tritium	20,000
Strontrium-90	8
Gross Beta particle activity	50
Uranium	20

ARTICLE 5.5.**PRIMARY STANDARDS—ORGANIC CHEMICALS****Section 64444. General requirements**

Table 64444-A
Maximum Contaminant Levels
Organic Chemicals

<i>Chemical</i>	<i>Maximum Contaminant Level, mg/L</i>
(a) Volatile Organic Chemicals (VOCs)	
Benzene	0.001
Carbon Tetrachloride	0.0005
1,2-Dichlorobenzene	0.6
1,4-Dichlorobenzene	0.005
1,1-Dichloroethane	0.005
1,2-Dichloroethane	0.0005
1,1-Dichloroethylene	0.006
cis-1,2-Dichloroethylene	0.006
trans-1,2-Dichloroethylene	0.01
Dichloromethane	0.005
1,2-Dichloropropane	0.005
1,3-Dichloropropene	0.0005
Ethylbenzene	0.3
Methyl- <i>tert</i> -butyl ether	0.013
Monochlorobenzene	0.07
Styrene	0.1
1,1,2,2-Tetrachloroethane	0.001
Tetrachloroethylene	0.005
Toluene	0.15
1,2,4-Trichlorobenzene	0.07
1,1,1-Trichloroethane	0.200
1,1,2-Trichloroethane	0.005
Trichloroethylene	0.005
Trichlorofluoromethane	0.15
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2
Vinyl Chloride	0.0005
Xylenes	1.750*

Table 64444-A (continued)
Maximum Contaminant Levels
Organic Chemicals

<i>Chemical</i>	<i>Maximum Contaminant Level, mg/L</i>
(b) Non-Volatile Synthetic Organic Chemicals (SOCs)	
Alachlor	0.002
Atrazine	0.001
Bentazon	0.018
Benzo(a)pyrene	0.0002
Carbofuran	0.018
Chlordane	0.0001
2,4-D	0.07
Dalapon	0.2
Dibromochloropropane (DBCP)	0.0002
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalate	0.004
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin	0.002
Ethylene Dibromide (EDB)	0.00005
Glyphosate	0.7
Heptachlor	0.00001
Heptachlor Epoxide	0.00001
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Lindane	0.0002
Methoxychlor	0.03
Molinate	0.02
Oxamyl	0.05
Pentachlorophenol	0.001
Picloram	0.5
Polychlorinated Biphenyls	0.0005
Simazine	0.004
Thiobencarb	0.07
Toxaphene	0.003
2,3,7,8-TCDD (Dioxin)	3×10^{-8}
2,4,5-TP (Silvex)	0.05

*MCL is for either a single isomer or the sum of the isomers.

ARTICLE 16. SECONDARY DRINKING WATER STANDARDS

Section 64449. Secondary maximum contaminant levels and compliance

Table 64449-A
Secondary Maximum Contaminant Levels
Consumer Acceptance Limits

<i>Constituents</i>	<i>Maximum Contaminant Levels/Units</i>
Aluminum	0.2 mg/L
Color	15 Units
Copper	1.0 mg/L
Corrosivity	Non-corrosive
Foaming Agents (MBAS)	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Methyl- <i>tert</i> -butyl ether (MTBE)	0.005 mg/L
Odor—Threshold	3 Units
Silver	0.1 mg/L
Thiobencarb	0.001 mg/L
Turbidity	5 Units
Zinc	5.0 mg/L

Table 64449-B
Secondary Maximum Contaminant Levels - Ranges

<i>Constituent, Units</i>	<i>Maximum Contaminant Level Ranges</i>		
	<i>Recommended</i>	<i>Upper</i>	<i>Short Term</i>
Total Dissolved Solids, mg/L or	500	1,000	1,500
Specific Conductance, micromhos	900	1,600	2,200
Chloride, mg/L	250	500	600
Sulfate, mg/L	250	500	600

CHAPTER 17.5. LEAD AND COPPER

ARTICLE 1. GENERAL REQUIREMENTS AND DEFINITIONS

Section 64672.3. Determination of compliance with lead and copper action levels

- (a) The lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with Article 6 is greater than 0.015 mg/L (i.e., if the "90th percentile" lead level is greater than 0.015 mg/L).
- (b) The copper action level is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with Article 6 is greater than 1.3 mg/L (i.e., if the "90th percentile" copper level is greater than 1.3 mg/L).

Appendix E2
California Unregulated Chemicals Required to Be Monitored

**ARTICLE 17. SPECIAL MONITORING REQUIREMENTS FOR
UNREGULATED ORGANIC CHEMICALS**

(1) Amend Section 64450 to read:

64450. Unregulated Chemicals --- Monitoring.

(a) Community water systems and nontransient-noncommunity water systems shall monitor for the chemicals in Tables 64450-A, 64450-B, 64450-C, and 64450-D, table 64450, pursuant to Section 64450.1 subsection (b):

Table 64450
Unregulated Chemicals

<u>Chemical</u>	<u>Synonyms</u>
(1) Boron	
(2) Chromium VI	Hexavalent chromium
(3) Dichlorodifluoromethane	Difluorodichloromethane
(4) Ethyl-tert-butyl ether	ETBE
(5) Perchlorate	
(6) tert-Amyl-methyl ether	TAME
(7) tert-Butyl alcohol	TBA
(8) 1,2,3-Trichloropropane	TCP
(9) Vanadium	

(b) All vulnerable community and nontransient-noncommunity water systems shall conduct and complete one round of monitoring for hexavalent chromium by December 31, 2002, and for the other unregulated chemicals in table 64450 by December 31, 2003. Monitoring shall be conducted by collecting source water samples, or samples from the distribution entry points that are representative of typical operating conditions. At least one of the samples shall be collected during the period from May 1 through July 31 (vulnerable time), unless the Department specifies a different vulnerable time for the water system due to seasonal conditions related to use, manufacture and/or weather.

Monitoring shall be as follows:

(1) Surface water systems shall collect four quarterly samples at each sample site; the system shall select either the first, second, or third month of a quarter and sample in that same month of each of four consecutive quarters.

(2) Ground water systems shall collect two samples in a single year, five to seven months apart.

(3) The water system shall collect each sample at the same sampling site, unless a change is approved by the Department.

(c) A water system may apply to the Department for a monitoring waiver for one or more of the chemicals on table 64450 in accordance with sections 64445(d)(1) and (2).

(d) If a system serves fewer than 150 service connections, it may be eligible for an exemption from the monitoring requirements of this section, based

on a Departmental review of the previous five years of sampling data. To request an exemption, the system operator shall submit a written request to the Department that includes a statement that the system is available for sampling by the Department.

(e) A water system that has monitoring data collected after January 1, 1998, that meets the requirements in subsection (b) may use that data to comply with the monitoring requirements in this section.

Table 64450-A
Unregulated Organic Chemicals—List A

Chemical	Synonyms
(1) Bromobenzene	Monebromobenzene
(2) Bromodichloromethane	Dichlorebromomethane
(3) Bromoform	Tribromomethane
(4) Bromomethane	Methyl Bromide
(5) Chlorodibromomethane	Dibromochloromethane
(6) Chloroethane	Ethyl Chloride
(7) Chloroform	Trichloromethane
(8) Chloromethane	Methyl Chloride
(9) 2-Chlorotoluene	o-Chlorotoluene
(10) 4-Chlorotoluene	p-Chlorotoluene
(11) Dibromomethane	Methylene Bromide
(12) 1,3-Dichlorobenzene	m-Dichlorobenzene
(13) Dichlorodifluoromethane	Difluroredichloromethane
(14) 1,3-Dichloropropane	
(15) 2,2-Dichloropropane	
(16) 1,1-Dichloropropene	
(17) 1,1,1,2-Tetrachloroethane	
(18) 1,2,3-Trichloropropane	Allyl Trichloride

Table 64450-B
Unregulated Organic Chemicals—List B

Chemical	Synonyms
(1) Bromacil	HYVAR-X, HYVAR-XL
(2) Bromochloromethane	Chlorobromomethane
(3) n-Butylbenzene	1-Butylpropane
(4) sec-Butylbenzene	2-Phenylbutane
(5) tert-Butylbenzene	2-Methyl-2-phenylpropane
(6) Chlorothalonil	BRAVO
(7) Dimethoate	CYGON
(8) Diuron	KARMEX, KROVAR
(9) Ethyl-tert-butyl ether	ETBE
(10) Hexachlorobutadiene	Perchlorobutadiene
(11) Isopropylbenzene	Cumene
(12) p-Isopropyltoluene	p-Cymene
(13) Naphthalene	Naphthalin
(14) 1-Phenylpropane	n-Propylbenzene
(15) Prometryn	CAPAROL
(16) tert-Amyl-methyl ether	TAME
(17) 1,2,3-Trichlorobenzene	vis-Trichlorobenzene
(18) 1,2,4-Trimethylbenzene	Pseudocumene
(19) 1,3,5-Trimethylbenzene	Mesitylene

Table 64450-C
Unregulated Organic Chemicals—List C

Chemical	Synonyms
(1) Aldicarb	
(2) Aldicarb sulfone	
(3) Aldicarb sulfoxide	
(4) Aldrin	Aldrec, Aldron
(5) Butachlor	Butanex, Lambast, Machete
(6) Carbaryl	Sevin
(7) Dicamba	Banex, Banvel, Dianat
(8) Dieldrin	
(9) 3-Hydroxycarbofuran	
(10) Methomyl	Lannate
(11) Metolachlor	Metelilachlor
(12) Metribuzin	Lexone, Sencor, Sencoral
(13) Propachlor	Albrass, Ramrod

Table 64450-D
Unregulated Inorganic Chemical

Chemical	Synonym
Perchlorate	

Note: Authority cited: Sections 100275, 116350 and 116375, Health and Safety Code.

Reference: Sections 116385 and 116555, Health and Safety Code.

(2) Repeal Section 64450.1:

64450.1. Monitoring—Unregulated Chemicals.

- (a) Community and nontransient noncommunity water systems shall monitor for the unregulated chemicals in this section at five-year intervals by collecting source water samples, or samples from the distribution entry points which are representative of typical operating conditions.
- (1) For the chemicals in Tables 64450-A and 64450-B, surface water systems shall collect one year of quarterly samples at each sampling site, and ground water systems shall collect a minimum of one sample per sampling site.
 - (2) For the chemicals in Tables 64450-C and 64450-D, both surface and ground water systems shall collect four consecutive quarterly samples at each sampling site.
 - (3) For the chemicals ETBE, TAME, and perchlorate, systems may use monitoring data collected any time after January 1, 1993 for water sampling sites to meet the initial monitoring requirements in this subsection.
 - (4) The system shall collect each sample at the same sampling site, unless a change is approved by the Department.
- (b) If a water system is determined by the Department to be nonvulnerable to one or more of the chemicals in Tables 64450-B, 64450-C, or 64450-D, pursuant to Subsection 64445(d)(1) or (2), it may request that the Department grant a monitoring waiver for those chemicals. The period of the waiver shall not exceed nine years.
- (c) A water system may request approval from the Department to composite samples from up to five sampling sites. Approval will be based on a review of three years of historical data, well construction and aquifer information for groundwater, and intake location, similarity of sources, and watershed characteristics for surface water. Compositing shall be done in the laboratory and analyses shall be conducted within 14 days of sample collection.
- (1) Systems serving more than 3,300 persons shall composite only from sampling sites within a single system. Systems serving 3,300 persons or less may composite among different systems up to the 5-sample limit.
 - (2) If any organic chemical is detected in the composite sample, a follow-up sample shall be analyzed within 14 days from each sampling site included in the composite for the contaminants which were detected. The water supplier shall report the results to the Department within 14 days of the follow-up sample collection. If available, duplicates of the original sample taken from each

sampling site used in the composite may be used instead of resampling.

(d) A community water system or nontransient noncommunity water system serving fewer than 150 service connections may be eligible for an exemption from the monitoring requirements of this section, based on a Departmental review of the previous five years of sampling data. To request an exemption, the system operator shall submit a written request to the Department which includes a statement that the system is available for sampling by the Department.

Note: Authority cited: Sections 100275, 116350, and 116375, Health and Safety Code.

Reference: Sections 116555, 116385, 116375, and 116400, Health and Safety Code.

Appendix E3
California State Action Levels

DHS DRINKING WATER ACTION LEVELS

Action levels (referred to as “notification levels” after January 1, 2005) are health-based advisory levels for unregulated contaminants in drinking water. They are used by the California Department of Health Services (DHS) to provide guidance to drinking water systems.

Detections of these chemicals above their action levels prompt certain requirements and recommendations.

For more about the derivation and application of action levels, as well as contaminant-specific information, see the Drinking Water Program’s website:

<http://www.dhs.ca.gov/ps/ddwem/AL/actionlevels.htm>

Contaminant	Action Level (milligrams per liter)
Boron*	1
n-Butylbenzene	0.26
sec-Butylbenzene	0.26
tert-Butylbenzene	0.26
Carbon disulfide	0.16
Chlorate*	0.8
2-Chlorotoluene	0.14
4-Chlorotoluene	0.14
Dichlorodifluoromethane*	1
1,4-Dioxane*	0.003
Ethylene glycol	14
Formaldehyde*	0.1
Isopropylbenzene	0.77
Manganese*	0.5
Methyl isobutyl ketone (MIBK)	0.12
Naphthalene	0.017
N-Nitrosodiethylamine (NDEA)	0.00001
N-Nitrosodimethylamine (NDMA)*	0.00001
Perchlorate*	0.006
n-Propylbenzene	0.26
Tertiary butyl alcohol*	0.012
1,2,3-Trichloropropane*	0.000005
1,2,4-Trimethylbenzene*	0.33
1,3,5-Trimethylbenzene*	0.33
Vanadium*	0.05

*indicates chemical was detected in at least one drinking water source 2001-2003

Appendix E4
State of California Public Health Goals

All PHGs developed as of August 12, 2003

Chemical (follow links below to download a copy of the PHG document)	California PHG (ppb)
1,1 Dichloroethylene	10
1,2 Dibromo-3-chloropropane	0.0017
1,2 Dichloroethane	0.4
1,2 Dichloropropane	0.5
1,2,4 Trichlorobenzene	5
1,2 Dichlorobenzene	600
1,3 Dichloropropene (Telone II®)	0.2
1,4 Dichlorobenzene	6
2,4 Dichlorophenoxyacetic acid	70
Alachlor	4
Aluminum	600
Antimony	20
Atrazine	0.15
Bentazon	200
Benzene	0.15
Benzo[a]pyrene	0.004
Cadmium	0.07
Carbofuran	1.7
Carbon Tetrachloride	0.1
Chlordane	0.03
Chromium (total)	withdrawn
Copper	170
Cyanide	150
Dalapon	790
Dichloromethane	4
Diethylhexylphthalate (DEHP)	12
Dinoseb	14
Diquat	15
Endothall	580
Endrin	1.8
Ethylbenzene	300
Fluoride	1,000
Glyphosate	1,000
Heptachlor	0.008
Heptachlor epoxide	0.006
Hexachlorocyclopentadiene	50
Lead	2
Lindane	0.032
Mercury, inorganic	1.2
Methoxychlor	30
Methyl tertiary butyl ether (MTBE)	13
Nickel	12

All PHGs developed as of August 12, 2003

Chemical (follow links below to download a copy of the PHG document)	California PHG (ppb)
Nitrate	10,000 as N
Nitrate and Nitrite	10,000 as N
Nitrite	1,000 as N
Oxamyl	50
Pentachlorophenol	0.4
Picloram	500
Simazine	4
Tetrachloroethylene	0.06
Thallium	0.1
Thiobencarb	70
Toluene	150
Trichloroethylene	0.8
Trichlorofluoromethane (Freon 11)	700
Trichlorotrifluoroethane (Freon 113)	4,000
Uranium	0.5
Vinyl Chloride	0.05
Xylene	1,800

Appendix E5
State of California – Proposition 65 List of Chemicals

STATE OF CALIFORNIA
 ENVIRONMENTAL PROTECTION AGENCY
 OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT
 SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986

CHEMICALS KNOWN TO THE STATE TO CAUSE CANCER OR REPRODUCTIVE TOXICITY
 JULY 11, 2003

The Safe Drinking Water and Toxic Enforcement Act of 1986 requires that the Governor revise and republish at least once per year the list of chemicals known to the State to cause cancer or reproductive toxicity. The identification number indicated in the following list is the Chemical Abstracts Service (CAS) Registry Number. No CAS number is given when several substances are presented as a single listing. The date refers to the initial appearance of the chemical on the list. For easy reference, chemicals which are shown underlined are newly added. Chemicals which are shown with a strikeout were placed on the list with the date noted, and have subsequently been removed.

CHEMICALS KNOWN TO THE STATE TO CAUSE CANCER

<u>Chemical</u>	<u>CAS Number</u>	<u>Date</u>
A-alpha-C (2-Amino-9H-pyrido[2,3-b]indole)	26148685	January 1, 1990
Acetaldehyde	75070	April 1, 1988
Acetamide	60355	January 1, 1990
Acetochlor	34256821	January 1, 1989
2-Acetylaminofluorene	53963	July 1, 1987
Acifluorfen	62476599	January 1, 1990
Acrylamide	79061	January 1, 1990
Acrylonitrile	107131	July 1, 1987
Actinomycin D	50760	October 1, 1989
Adriamycin (Doxorubicin hydrochloride)	23214928	July 1, 1987
AF-2;[2-(2-furyl)-3-(5-nitro-2-furyl)]acrylamide	3688537	July 1, 1987
Aflatoxins	---	January 1, 1988
Alachlor	15972608	January 1, 1989
Alcoholic beverages, when associated with alcohol abuse	---	July 1, 1988
Aldrin	309002	July 1, 1988
<u>Allyl chloride</u> <u>Delisted October 29, 1999</u>	<u>107051</u>	<u>January 1, 1990</u>
2-Aminoanthraquinone	117793	October 1, 1989
p-Aminoazobenzene	60093	January 1, 1990
ortho-Aminoazotoluene	97563	July 1, 1987
4-Aminobiphenyl (4-aminodiphenyl)	92671	February 27, 1987
1-Amino-2,4-dibromoanthraquinone	81492	August 26, 1997
3-Amino-9-ethylcarbazole hydrochloride	6109973	July 1, 1989
2-Aminofluorene	153786	January 29, 1999
1-Amino-2-methylanthraquinone	82280	October 1, 1989
2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole	712685	July 1, 1987
4-Amino-2-nitrophenol	119346	January 29, 1999
Amitrole	61825	July 1, 1987
Analgesic mixtures containing phenacetin	---	February 27, 1987
Aniline	62533	January 1, 1990
Aniline hydrochloride	142041	May 15, 1998
ortho-Anisidine	90040	July 1, 1987
ortho-Anisidine hydrochloride	134292	July 1, 1987
Antimony oxide (Antimony trioxide)	1309644	October 1, 1990
Aramite	140578	July 1, 1987

Arsenic (inorganic arsenic compounds)	---	February 27, 1987
Asbestos	1332214	February 27, 1987
Auramine	492808	July 1, 1987
Azacitidine	320672	January 1, 1992
Azaserine	115026	July 1, 1987
Azathioprine	446866	February 27, 1987
Azobenzene	103333	January 1, 1990
 Benz[a]anthracene	56553	July 1, 1987
Benzene	71432	February 27, 1987
Benzidine [and its salts]	92875	February 27, 1987
Benzidine-based dyes	---	October 1, 1992
Benzo[b]fluoranthene	205992	July 1, 1987
Benzo[j]fluoranthene	205823	July 1, 1987
Benzo[k]fluoranthene	207089	July 1, 1987
Benzofuran	271896	October 1, 1990
Benzo[a]pyrene	50328	July 1, 1987
Benzotrichloride	98077	July 1, 1987
Benzyl chloride	100447	January 1, 1990
Benzyl violet 4B	1694093	July 1, 1987
Beryllium and beryllium compounds	---	October 1, 1987
Betel quid with tobacco	---	January 1, 1990
2,2-Bis(bromomethyl)-1,3-propanediol	3296900	May 1, 1996
Bis(2-chloroethyl)ether	111444	April 1, 1988
N,N-Bis(2-chloroethyl)-2-naphthylamine (Chlornapazine)	494031	February 27, 1987
Bischloroethyl nitrosourea (BCNU) (Carmustine)	154938	July 1, 1987
Bis(chloromethyl)ether	542881	February 27, 1987
Bis(2-chloro-1-methylethyl)ether, technical grade	---	October 29, 1999
Bitumens, extracts of steam-refined and air refined	---	January 1, 1990
Bracken fern	---	January 1, 1990
Bromate	15541454	May 31, 2002
Bromodichloromethane	75274	January 1, 1990
Bromoethane	74964	December 22, 2000
Bromoform	75252	April 1, 1991
1,3-Butadiene	106990	April 1, 1988
1,4-Butanediol dimethanesulfonate (Busulfan)	55981	February 27, 1987
Butylated hydroxyanisole	25013165	January 1, 1990
beta-Butyrolactone	3068880	July 1, 1987
 Cacodylic acid	75605	May 1, 1996
Cadmium and cadmium compounds	---	October 1, 1987
Caffeic acid	331395	October 1, 1994
Captafol	2425061	October 1, 1988
Captan	133062	January 1, 1990
Carbazole	86748	May 1, 1996
Carbon black (airborne, unbound particles of respirable size)	1333864	February 21, 2003
Carbon tetrachloride	56235	October 1, 1987
Carbon-black extracts	---	January 1, 1990
N-Carboxymethyl-N-nitrosourea	60391926	January 25, 2002
<u>Catechol</u>	<u>120809</u>	<u>July 15, 2003</u>
Ceramic fibers (airborne particles of respirable size)	---	July 1, 1990
Certain combined chemotherapy for lymphomas	---	February 27, 1987
Chlorambucil	305033	February 27, 1987

Chloramphenicol	56757	October 1, 1989
Chlordane	57749	July 1, 1988
Chlordecone (Kepone)	143500	January 1, 1988
Chlordimeform	6164983	January 1, 1989
Chlorendic acid	115286	July 1, 1989
Chlorinated paraffins (Average chain length, C12; approximately 60 percent chlorine by weight)	108171262	July 1, 1989
p-Chloroaniline	106478	October 1, 1994
p-Chloroaniline hydrochloride	20265967	May 15, 1998
<u>Chlorodibromomethane Delisted October 29, 1999</u>	<u>124481</u>	<u>January 1, 1990</u>
Chloroethane (Ethyl chloride)	75003	July 1, 1990
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU) (Lomustine)	13010474	January 1, 1988
1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1- nitrosourea (Methyl-CCNU)	13909096	October 1, 1988
Chloroform	67663	October 1, 1987
Chloromethyl methyl ether (technical grade)	107302	February 27, 1987
3-Chloro-2-methylpropene	563473	July 1, 1989
1-Chloro-4-nitrobenzene	100005	October 29, 1999
4-Chloro-ortho-phenylenediamine	95830	January 1, 1988
p-Chloro-o-toluidine	95692	January 1, 1990
p-Chloro-o-toluidine, strong acid salts of	---	May 15, 1998
5-Chloro-o-toluidine and its strong acid salts	---	October 24, 1997
Chloroprene	126998	June 2, 2000
Chlorothalonil	1897456	January 1, 1989
Chlorotrianisene	569573	September 1, 1996
Chlorozotocin	54749905	January 1, 1992
Chromium (hexavalent compounds)	---	February 27, 1987
Chrysene	218019	January 1, 1990
C.I. Acid Red 114	6459945	July 1, 1992
C.I. Basic Red 9 monohydrochloride	569619	July 1, 1989
C.I. Direct Blue 15	2429745	August 26, 1997
C.I. Direct Blue 218	28407376	August 26, 1997
C.I. Solvent Yellow 14	842079	May 15, 1998
Ciclosporin (Cyclosporin A; Cyclosporine)	59865133 79217600	January 1, 1992 January 29, 1999
Cidofovir	113852372	July 1, 1989
Cinnamyl anthranilate	87296	October 1, 1988
Cisplatin	15663271	October 1, 1989
Citrus Red No. 2	6358538	September 1, 1996
Clofibrate	637070	July 1, 1992
Cobalt metal powder	7440484	July 1, 1992
Cobalt [II] oxide	1307966	July 1, 1992
Cobalt sulfate heptahydrate	10026241	June 2, 2000
Coke oven emissions	---	February 27, 1987
Conjugated estrogens	---	February 27, 1987
Creosotes	---	October 1, 1988
para-Cresidine	120718	January 1, 1988
Cupferron	135206	January 1, 1988
Cycasin	14901087	January 1, 1988
Cyclophosphamide (anhydrous)	50180	February 27, 1987
Cyclophosphamide (hydrated)	6055192	February 27, 1987
Cytembena	21739913	May 15, 1998

D&C Orange No. 17	3468631	July 1, 1990
D&C Red No. 8	2092560	October 1, 1990
D&C Red No. 9	5160021	July 1, 1990
D&C Red No. 19	81889	July 1, 1990
Dacarbazine	4342034	January 1, 1988
Daminozide	1596845	January 1, 1990
Dantron (Chrysazin; 1,8-Dihydroxyanthraquinone)	117102	January 1, 1992
Daunomycin	20830813	January 1, 1988
DDD (Dichlorodiphenyldichloroethane)	72548	January 1, 1989
DDE (Dichlorodiphenyldichloroethylene)	72559	January 1, 1989
DDT (Dichlorodiphenyltrichloroethane)	50293	October 1, 1987
DDVP (Dichlorvos)	62737	January 1, 1989
N,N'-Diacetylbenzidine	613354	October 1, 1989
2,4-Diaminoanisole	615054	October 1, 1990
2,4-Diaminoanisole sulfate	39156417	January 1, 1988
4,4'-Diaminodiphenyl ether (4,4'-Oxydianiline)	101804	January 1, 1988
2,4-Diaminotoluene	95807	January 1, 1988
Diaminotoluene (mixed)	---	January 1, 1990
Dibenz[a,h]acridine	226368	January 1, 1988
Dibenz[a,j]acridine	224420	January 1, 1988
Dibenz[a,h]anthracene	53703	January 1, 1988
7H-Dibenzo[c,g]carbazole	194592	January 1, 1988
Dibenzo[a,e]pyrene	192654	January 1, 1988
Dibenzo[a,h]pyrene	189640	January 1, 1988
Dibenzo[a,i]pyrene	189559	January 1, 1988
Dibenzo[a,l]pyrene	191300	January 1, 1988
1,2-Dibromo-3-chloropropane (DBCP)	96128	July 1, 1987
2,3-Dibromo-1-propanol	96139	October 1, 1994
Dichloroacetic acid	79436	May 1, 1996
p-Dichlorobenzene	106467	January 1, 1989
3,3'-Dichlorobenzidine	91941	October 1, 1987
3,3'-Dichlorobenzidine dihydrochloride	612839	May 15, 1998
1,4-Dichloro-2-butene	764410	January 1, 1990
3,3'-Dichloro-4,4'-diaminodiphenyl ether	28434868	January 1, 1988
1,1-Dichloroethane	75343	January 1, 1990
Dichloromethane (Methylene chloride)	75092	April 1, 1988
1,2-Dichloropropane	78875	January 1, 1990
1,3-Dichloropropene	542756	January 1, 1989
Dieldrin	60571	July 1, 1988
Dienestrol	84173	January 1, 1990
Diepoxybutane	1464535	January 1, 1988
Diesel engine exhaust	---	October 1, 1990
Di(2-ethylhexyl)phthalate	117817	January 1, 1988
1,2-Diethylhydrazine	1615801	January 1, 1988
Diethyl sulfate	64675	January 1, 1988
Diethylstilbestrol (DES)	56531	February 27, 1987
Diglycidyl resorcinol ether (DGRE)	101906	July 1, 1989
Dihydrosafrole	94586	January 1, 1988
Diisopropyl sulfate	2973106	April 1, 1993
3,3'-Dimethoxybenzidine (ortho-Dianisidine)	119904	January 1, 1988
3,3'-Dimethoxybenzidine dihydrochloride (ortho-Dianisidine dihydrochloride)	20325400	October 1, 1990
Dimethyl sulfate	77781	January 1, 1988
4-Dimethylaminoazobenzene	60117	January 1, 1988

trans-2-[(Dimethylamino)methylimino]-5-[2-(5-nitro-2-furyl)vinyl]-1,3,4-oxadiazole	55738540	January 1, 1988
7,12-Dimethylbenz(a)anthracene	57976	January 1, 1990
3,3'-Dimethylbenzidine (ortho-Tolidine)	119937	January 1, 1988
3,3'-Dimethylbenzidine dihydrochloride	612828	April 1, 1992
Dimethylcarbamoyl chloride	79447	January 1, 1988
1,1-Dimethylhydrazine (UDMH)	57147	October 1, 1989
1,2-Dimethylhydrazine	540738	January 1, 1988
Dimethylvinylchloride	513371	July 1, 1989
3,7-Dinitrofluoranthene	105735715	August 26, 1997
3,9-Dinitrofluoranthene	22506532	August 26, 1997
1,6-Dinitropyrene	42397648	October 1, 1990
1,8-Dinitropyrene	42397659	October 1, 1990
Dinitrotoluene mixture, 2,4-/2,6-	---	May 1, 1996
2,4-Dinitrotoluene	121142	July 1, 1988
2,6-Dinitrotoluene	606202	July 1, 1995
Di-n-propyl isocinchomeronate (MGK Repellent 326)	136458	May 1, 1996
1,4-Dioxane	123911	January 1, 1988
Diphenylhydantoin (Phenytoin)	57410	January 1, 1988
Diphenylhydantoin (Phenytoin), sodium salt	630933	January 1, 1988
Direct Black 38 (technical grade)	1937377	January 1, 1988
Direct Blue 6 (technical grade)	2602462	January 1, 1988
Direct Brown 95 (technical grade)	16071866	October 1, 1988
Disperse Blue 1	2475458	October 1, 1990
Diuron	330541	May 31, 2002
Epichlorohydrin	106898	October 1, 1987
Erionite	12510428	October 1, 1988
Estradiol 17B	50282	January 1, 1988
Estragole	140670	October 29, 1999
Estrone	53167	January 1, 1988
Estropipate	7280377	August 26, 1997
Ethinylestradiol	57636	January 1, 1988
Ethoprop	13194484	February 27, 2001
Ethyl acrylate	140885	July 1, 1989
Ethyl methanesulfonate	62500	January 1, 1988
Ethyl-4,4'-dichlorobenzilate	510156	January 1, 1990
Ethylene dibromide	106934	July 1, 1987
Ethylene dichloride (1,2-Dichloroethane)	107062	October 1, 1987
Ethylene oxide	75218	July 1, 1987
Ethylene thiourea	96457	January 1, 1988
Ethyleneimine	151564	January 1, 1988
Fenoxy carb	72490018	June 2, 2000
Folpet	133073	January 1, 1989
Formaldehyde (gas)	50000	January 1, 1988
2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole	3570750	January 1, 1988
Furan	110009	October 1, 1993
Furazolidone	67458	January 1, 1990
Furmecyclox	60568050	January 1, 1990
Fusarin C	79748815	July 1, 1995
Ganciclovir sodium	82410320	August 26, 1997
Gasoline engine exhaust (condensates/extracts)	---	October 1, 1990

Gemfibrozil	25812300	December 22, 2000
Glasswool fibers (airborne particles of respirable size)	---	July 1, 1990
Glu-P-1 (2-Amino-6-methyldipyrido[1,2-a:3',2'-d]imidazole)	67730114	January 1, 1990
Glu-P-2 (2-Aminodipyrido[1,2-a:3',2'-d]imidazole)	67730103	January 1, 1990
Glycidaldehyde	765344	January 1, 1988
Glycidol	556525	July 1, 1990
Griseofulvin	126078	January 1, 1990
Gyromitrin (Acetaldehyde methylformylhydrazone)	16568028	January 1, 1988
HC Blue 1	2784943	July 1, 1989
Heptachlor	76448	July 1, 1988
Heptachlor epoxide	1024573	July 1, 1988
Hexachlorobenzene	118741	October 1, 1987
Hexachlorocyclohexane (technical grade)	---	October 1, 1987
Hexachlorodibenzodioxin	34465468	April 1, 1988
Hexachloroethane	67721	July 1, 1990
Hexamethylphosphoramide	680319	January 1, 1988
Hydrazine	302012	January 1, 1988
Hydrazine sulfate	10034932	January 1, 1988
Hydrazobenzene (1,2-Diphenylhydrazine)	122667	January 1, 1988
Indeno [1,2,3-cd]pyrene	193395	January 1, 1988
Indium phosphide	22398807	February 27, 2001
IQ (2-Amino-3-methylimidazo[4,5-f]quinoline)	76180966	April 1, 1990
Iprodione	36734197	May 1, 1996
Iron dextran complex	9004664	January 1, 1988
Isobutyl nitrite	542563	May 1, 1996
Isoprene	78795	May 1, 1996
Isosafrole	120581	October 1, 1989
Isoxaflutole	141112290	December 22, 2000
Lactofen	77501634	January 1, 1989
Lasiocarpine	303344	April 1, 1988
Lead acetate	301042	January 1, 1988
Lead and lead compounds	---	October 1, 1992
Lead phosphate	7446277	April 1, 1988
Lead subacetate	1335326	October 1, 1989
Lindane and other hexachlorocyclohexane isomers	---	October 1, 1989
Lynestrenol	52766	February 27, 2001
Mancozeb	8018017	January 1, 1990
Maneb	12427382	January 1, 1990
Me-A-alpha-C (2-Amino-3-methyl-9H-pyrido[2,3-b]indole)	68006837	January 1, 1990
Medroxyprogesterone acetate	71589	January 1, 1990
MeIQ(2-Amino-3,4-dimethylimidazo[4,5-f]quinoline)	77094112	October 1, 1994
MeIQx(2-Amino-3,8-dimethylimidazo[4,5-f]quinoxaline)	77500040	October 1, 1994
Melphalan	148823	February 27, 1987
Merphalan	531760	April 1, 1988
Mestranol	72333	April 1, 1988
Metham sodium	137428	November 6, 1998
8-Methoxysoralen with ultraviolet A therapy	298817	February 27, 1987
5-Methoxysoralen with ultraviolet A therapy	484208	October 1, 1988
2-Methylaziridine (Propyleneimine)	75558	January 1, 1988

Methylazoxymethanol	590965	April 1, 1988
Methylazoxymethanol acetate	592621	April 1, 1988
Methyl carbamate	598550	May 15, 1998
3-Methylcholanthrene	56495	January 1, 1990
5-Methylchrysene	3697243	April 1, 1988
4,4'-Methylene bis(2-chloroaniline)	101144	July 1, 1987
4,4'-Methylene bis(N,N-dimethyl)benzenamine	101611	October 1, 1989
4,4'-Methylene bis(2-methylaniline)	838880	April 1, 1988
4,4'-Methylenedianiline	101779	January 1, 1988
4,4'-Methylenedianiline dihydrochloride	13552448	January 1, 1988
Methyleugenol	93152	November 16, 2001
Methylhydrazine and its salts	---	July 1, 1992
Methyl iodide	74884	April 1, 1988
Methylmercury compounds	---	May 1, 1996
Methyl methanesulfonate	66273	April 1, 1988
2-Methyl-1-nitroanthraquinone (of uncertain purity)	129157	April 1, 1988
N-Methyl-N'-nitro-N-nitrosoguanidine	70257	April 1, 1988
N-Methylolacrylamide	924425	July 1, 1990
Methylthiouracil	56042	October 1, 1989
Metiram	9006422	January 1, 1990
Metronidazole	443481	January 1, 1988
Michler's ketone	90948	January 1, 1988
Mirex	2385855	January 1, 1988
Mitomycin C	50077	April 1, 1988
Monocrotaline	315220	April 1, 1988
5-(Morpholinomethyl)-3-[(5-nitro-furfurylidene)- amino]-2-oxazolidinone	139913	April 1, 1988
Mustard Gas	505602	February 27, 1987
MX (3-chloro-4-dichloromethyl-5-hydroxy-2(5H)-furanone)	77439760	December 22, 2000
Nafenopin	3771195	April 1, 1988
Nalidixic acid	389082	May 15, 1998
Naphthalene	91203	April 19, 2002
1-Naphthylamine	134327	October 1, 1989
2-Naphthylamine	91598	February 27, 1987
Nickel (Metallic)	7440020	October 1, 1989
Nickel acetate	373024	October 1, 1989
Nickel carbonate	<u>3333393</u> <u>3333673</u>	October 1, 1989
Nickel carbonyl	13463393	October 1, 1987
Nickel hydroxide	12054487; 12125563	October 1, 1989
Nickelocene	1271289	October 1, 1989
Nickel oxide	1313991	October 1, 1989
Nickel refinery dust from the pyrometallurgical process	---	October 1, 1987
Nickel subsulfide	12035722	October 1, 1987
Niridazole	61574	April 1, 1988
Nitrilotriacetic acid	139139	January 1, 1988
Nitrilotriacetic acid, trisodium salt monohydrate	18662538	April 1, 1989
5-Nitroacenaphthene	602879	April 1, 1988
5-Nitro-o-anisidine	99592	October 1, 1989
o-Nitroanisole	91236	October 1, 1992
Nitrobenzene	98953	August 26, 1997
4-Nitrobiphenyl	92933	April 1, 1988

6-Nitrochrysene	7496028	October 1, 1990
Nitrofen (technical grade)	1836755	January 1, 1988
2-Nitrofluorene	607578	October 1, 1990
Nitrofurazone	59870	January 1, 1990
1-[(5-Nitrofurylidene)-amino]-2-imidazolidinone	555840	April 1, 1988
N-[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide	531828	April 1, 1988
Nitrogen mustard (Mechlorethamine)	51752	January 1, 1988
Nitrogen mustard hydrochloride (Mechlorethamine hydrochloride)	55867	April 1, 1988
Nitrogen mustard N-oxide	126852	April 1, 1988
Nitrogen mustard N-oxide hydrochloride	302705	April 1, 1988
Nitromethane	75525	May 1, 1997
2-Nitropropane	79469	January 1, 1988
1-Nitropyrene	5522430	October 1, 1990
4-Nitropyrene	57835924	October 1, 1990
N-Nitrosodi-n-butylamine	924163	October 1, 1987
N-Nitrosodiethanolamine	1116547	January 1, 1988
N-Nitrosodiethylamine	55185	October 1, 1987
N-Nitrosodimethylamine	62759	October 1, 1987
p-Nitrosodiphenylamine	156105	January 1, 1988
N-Nitrosodiphenylamine	86306	April 1, 1988
N-Nitrosodi-n-propylamine	621647	January 1, 1988
N-Nitroso-N-ethylurea	759739	October 1, 1987
3-(N-Nitrosomethylamino)propionitrile	60153493	April 1, 1990
4-(N-Nitrosomethylamino)-1-(3-pyridyl)1-butanone	64091914	April 1, 1990
N-Nitrosomethylethylamine	10595956	October 1, 1989
N-Nitroso-N-methylurea	684935	October 1, 1987
N-Nitroso-N-methylurethane	615532	April 1, 1988
N-Nitrosomethylvinylamine	4549400	January 1, 1988
N-Nitrosomorpholine	59892	January 1, 1988
N-Nitrosonornicotine	16543558	January 1, 1988
N-Nitrosopiperidine	100754	January 1, 1988
N-Nitrosopyrrolidine	930552	October 1, 1987
N-Nitrososarcosine	13256229	January 1, 1988
o-Nitrotoluene	88722	May 15, 1998
Norethisterone (Norethindrone)	68224	October 1, 1989
Norethynodrel	68235	February 27, 2001
Ochratoxin A	303479	July 1, 1990
Oil Orange SS	2646175	April 1, 1988
Oral contraceptives, combined	---	October 1, 1989
Oral contraceptives, sequential	---	October 1, 1989
Oxadiazon	19666309	July 1, 1991
Oxazepam	604751	October 1, 1994
Oxymetholone	434071	January 1, 1988
Oxythioquinox	2439012	August 20, 1999
Palygorskite fibers (> 5µm in length)	12174117	December 28, 1999
Panfurran S	794934	January 1, 1988
Pentachlorophenol	87865	January 1, 1990
Phenacetin	62442	October 1, 1989
Phenazopyridine	94780	January 1, 1988
Phenazopyridine hydrochloride	136403	January 1, 1988

Phenesterin	3546109	July 1, 1989
Phenobarbital	50066	January 1, 1990
Phenolphthalein	77098	May 15, 1998
Phenoxybenzamine	59961	April 1, 1988
Phenoxybenzamine hydrochloride	63923	April 1, 1988
o-Phenylenediamine and its salts	95545	May 15, 1998
Phenyl glycidyl ether	122601	October 1, 1990
Phenylhydrazine and its salts	---	July 1, 1992
o-Phenylphenate, sodium	132274	January 1, 1990
o-Phenylphenol	90437	August 4, 2000
PhiP(2-Amino-1-methyl-6-phenylimidazol[4,5-b]pyridine)	105650235	October 1, 1994
Polybrominated biphenyls	---	January 1, 1988
Polychlorinated biphenyls	---	October 1, 1989
Polychlorinated biphenyls (containing 60 or more percent chlorine by molecular weight)	---	January 1, 1988
Polychlorinated dibenzo-p-dioxins	---	October 1, 1992
Polychlorinated dibenzofurans	---	October 1, 1992
Polygeenan	53973981	January 1, 1988
Ponceau MX	3761533	April 1, 1988
Ponceau 3R	3564098	April 1, 1988
Potassium bromate	7758012	January 1, 1990
Primidone	125337	August 20, 1999
Procarbazine	671169	January 1, 1988
Procarbazine hydrochloride	366701	January 1, 1988
Procymidone	32809168	October 1, 1994
Progesterone	57830	January 1, 1988
Pronamide	23950585	May 1, 1996
Propachlor	1918167	February 27, 2001
1,3-Propane sultone	1120714	January 1, 1988
Propargite	2312358	October 1, 1994
beta-Propiolactone	57578	January 1, 1988
Propylene oxide	75569	October 1, 1988
Propylthiouracil	51525	January 1, 1988
Pyridine	110861	May 17, 2002
Quinoline and its strong acid salts	---	October 24, 1997
Radionuclides	---	July 1, 1989
Reserpine	50555	October 1, 1989
Residual (heavy) fuel oils	---	October 1, 1990
<u>Saccharin Delisted April 6, 2001</u>	<u>81072</u>	<u>October 1, 1989</u>
<u>Saccharin, sodium Delisted January 17, 2003</u>	<u>128449</u>	<u>January 1, 1988</u>
Safrole	94597	January 1, 1988
Salicylazosulfapyridine	599791	May 15, 1998
Selenium sulfide	7446346	October 1, 1989
Shale-oils	68308349	April 1, 1990
Silica, crystalline (airborne particles of respirable size)	---	October 1, 1988
Soots, tars, and mineral oils (untreated and mildly treated oils and used engine oils)	---	February 27, 1987
Spirolactone	52017	May 1, 1997
Stanozolol	10418038	May 1, 1997
Sterigmatocystin	10048132	April 1, 1988
Streptozotocin (streptozocin)	18883664	January 1, 1988

Strong inorganic acid mists containing sulfuric acid	---	March 14, 2003
Styrene oxide	96093	October 1, 1988
Sulfallate	95067	January 1, 1988
Talc containing asbestos fibers	---	April 1, 1990
Tamoxifen and its salts	10540291	September 1, 1996
Terrazole	2593159	October 1, 1994
Testosterone and its esters	58220	April 1, 1988
2,3,7,8-Tetrachlorodibenzo-para-dioxin (TCDD)	1746016	January 1, 1988
1,1,2,2-Tetrachloroethane	79345	July 1, 1990
Tetrachloroethylene (Perchloroethylene)	127184	April 1, 1988
p-a,a,a-Tetrachlorotoluene	5216251	January 1, 1990
Tetrafluoroethylene	116143	May 1, 1997
Tetranitromethane	509148	July 1, 1990
Thioacetamide	62555	January 1, 1988
4,4'-Thiodianiline	139651	April 1, 1988
Thiodicarb	59669260	August 20, 1999
Thiourea	62566	January 1, 1988
Thorium dioxide	1314201	February 27, 1987
Tobacco, oral use of smokeless products	---	April 1, 1988
Tobacco smoke	---	April 1, 1988
Toluene diisocyanate	26471625	October 1, 1989
ortho-Toluidine	95534	January 1, 1988
ortho-Toluidine hydrochloride	636215	January 1, 1988
<u>para-Toluidine Delisted October 29, 1999</u>	<u>106490</u>	<u>January 1, 1990</u>
Toxaphene (Polychlorinated camphenes)	8001352	January 1, 1988
Treosulfan	299752	February 27, 1987
Trichlormethine (Trimustine hydrochloride)	817094	January 1, 1992
Trichloroethylene	79016	April 1, 1988
2,4,6-Trichlorophenol	88062	January 1, 1988
1,2,3-Trichloropropane	96184	October 1, 1992
Trimethyl phosphate	512561	May 1, 1996
2,4,5-Trimethylaniline and its strong acid salts	---	October 24, 1997
Triphenyltin hydroxide	76879	July 1, 1992
Tris(aziridinyl)-para-benzoquinone (Triaziquone)	68768	October 1, 1989
Tris(1-aziridinyl)phosphine sulfide (Thiotepa)	52244	January 1, 1988
Tris(2-chloroethyl) phosphate	115968	April 1, 1992
Tris(2,3-dibromopropyl)phosphate	126727	January 1, 1988
Trp-P-1 (Tryptophan-P-1)	62450060	April 1, 1988
Trp-P-2 (Tryptophan-P-2)	62450071	April 1, 1988
Trypan blue (commercial grade)	72571	October 1, 1989
Unleaded gasoline (wholly vaporized)	---	April 1, 1988
Uracil mustard	66751	April 1, 1988
Urethane (Ethyl carbamate)	51796	January 1, 1988
Vinclozolin	50471448	August 20, 1999
Vinyl bromide	593602	October 1, 1988
Vinyl chloride	75014	February 27, 1987
4-Vinylcyclohexene	100403	May 1, 1996
4-Vinyl-1-cyclohexene diepoxyde (Vinyl cyclohexenedioxide)	106876	July 1, 1990
Vinyl fluoride	75025	May 1, 1997
Vinyl trichloride (1,1,2-Trichloroethane)	79005	October 1, 1990

2,6-Xylidine (2,6-Dimethylaniline)	87627	January 1, 1991
Zileuton <i>Zineb Delisted October 29, 1999</i>	111406872 <i>12122677</i>	December 22, 2000 <i>January 1, 1990</i>

CHEMICALS KNOWN TO THE STATE TO CAUSE REPRODUCTIVE TOXICITY

Chemical	Type of Reproductive Toxicity	CAS No.	Date Listed
Acetazolamide	developmental	59665	August 20, 1999
Acetohydroxamic acid	developmental	546883	April 1, 1990
Actinomycin D	developmental	50760	October 1, 1992
All-trans retinoic acid	developmental	302794	January 1, 1989
Alprazolam	developmental	28981977	July 1, 1990
Altretamine	developmental, male	645056	August 20, 1999
Amantadine hydrochloride	developmental	665667	February 27, 2001
Amikacin sulfate	developmental	39831555	July 1, 1990
Aminoglutethimide	developmental	125848	July 1, 1990
Aminoglycosides	developmental	---	October 1, 1992
Aminopterin	developmental, female	54626	July 1, 1987
Amiodarone hydrochloride	developmental, female, male	19774824	August 26, 1997
Amitraz	developmental	33089611	March 30, 1999
Amoxapine	developmental	14028445	May 15, 1998
Anabolic steroids	female, male	---	April 1, 1990
Angiotensin converting enzyme (ACE) inhibitors	developmental	---	October 1, 1992
Anisindione	developmental	117373	October 1, 1992
Arsenic (inorganic oxides)	developmental	---	May 1, 1997
Aspirin (NOTE: It is especially important not to use aspirin during the last three months of pregnancy, unless specifically directed to do so by a physician because it may cause problems in the unborn child or complications during delivery.)	developmental, female	50782	July 1, 1990
Atenolol	developmental	29122687	August 26, 1997
Auranofin	developmental	34031328	January 29, 1999
Azathioprine	developmental	446866	September 1, 1996
Barbiturates	developmental	---	October 1, 1992
Beclomethasone dipropionate	developmental	5534098	May 15, 1998
Benomyl	developmental, male	17804352	July 1, 1991
Benzene	developmental, male	71432	December 26, 1997
Benzodiazepines	developmental	---	October 1, 1992
Benzphetamine hydrochloride	developmental	5411223	April 1, 1990
Bischloroethyl nitrosourea (BCNU) (Carmustine)	developmental	154938	July 1, 1990
Bromacil lithium salt	developmental	53404196	May 18, 1999
	male		January 17, 2003
Bromoxynil	developmental	1689845	October 1, 1990
Bromoxynil octanoate	developmental	1689992	May 18, 1999
Butabarbital sodium	developmental	143817	October 1, 1992

1,4-Butanediol dimethane-sulfonate (Busulfan)	developmental	55981	January 1, 1989
Cadmium	developmental, male	---	May 1, 1997
Carbamazepine	developmental	298464	January 29, 1999
Carbon disulfide	developmental, female, male	75150	July 1, 1989
Carbon monoxide	developmental	630080	July 1, 1989
Carboplatin	developmental	41575944	July 1, 1990
Chenodiol	developmental	474259	April 1, 1990
Chinomethionat (Oxythioquinox)	developmental	2439012	November 6, 1998
Chlorambucil	developmental	305033	January 1, 1989
Chlorcyclizine hydrochloride	developmental	1620219	July 1, 1987
Chlordecone (Kepone)	developmental	143500	January 1, 1989
Chlordiazepoxide	developmental	58253	January 1, 1992
Chlordiazepoxide hydrochloride	developmental	438415	January 1, 1992
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU) (Lomustine)	developmental	13010474	July 1, 1990
Chlorsulfuron	developmental, female, male	64902723	May 14, 1999
Cidofovir	developmental, female, male	113852372	January 29, 1999
Cladribine	developmental	4291638	September 1, 1996
Clarithromycin	developmental	81103119	May 1, 1997
Clobetasol propionate	developmental, female	25122467	May 15, 1998
Clomiphene citrate	developmental	50419	April 1, 1990
Clorazepate dipotassium	developmental	57109907	October 1, 1992
Cocaine	developmental, female	50362	July 1, 1989
Codeine phosphate	developmental	52288	May 15, 1998
Colchicine	developmental, male	64868	October 1, 1992
Conjugated estrogens	developmental	---	April 1, 1990
Cyanazine	developmental	21725462	April 1, 1990
Cycloate	developmental	1134232	March 19, 1999
Cyclohexanol	male	108930	November 6, 1998
<u>Delisted January 25, 2002</u>			
Cycloheximide	developmental	66819	January 1, 1989
Cyclophosphamide (anhydrous)	developmental, female, male	50180	January 1, 1989
Cyclophosphamide (hydrated)	developmental, female, male	6055192	January 1, 1989
Cyhexatin	developmental	13121705	January 1, 1989
Cytarabine	developmental	147944	January 1, 1989
Dacarbazine	developmental	4342034	January 29, 1999
Danazol	developmental	17230885	April 1, 1990
Daunorubicin hydrochloride	developmental	23541506	July 1, 1990
2,4-D butyric acid	developmental , male	94826	June 18, 1999
o,p'-DDT	developmental, female, male	789026	May 15, 1998
p,p'-DDT	developmental, female, male	50293	May 15, 1998
2,4 DP (dichloroprop)	developmental	120365	April 27, 1999
<u>Delisted January 25, 2002</u>			
Demeclocycline hydrochloride (internal use)	developmental	64733	January 1, 1992
Diazepam	developmental	439145	January 1, 1992
Diazoxide	developmental	364987	February 27, 2001
1,2-Dibromo-3-chloropropane (DBCP)	male	96128	February 27, 1987
Dichlorophene	developmental	97234	April 27, 1999

Dichlorphenamide	developmental	120978	February 27, 2001
Diclofop methyl	developmental	51338273	March 5, 1999
Dicumarol	developmental	66762	October 1, 1992
Diethylstilbestrol (DES)	developmental	56531	July 1, 1987
Diflunisal	developmental, female	22494424	January 29, 1999
Dihydroergotamine mesylate	developmental	6190392	May 1, 1997
Diltiazem hydrochloride	developmental	33286225	February 27, 2001
<i>m</i> -Dinitrobenzene	male	99650	July 1, 1990
<i>o</i> -Dinitrobenzene	male	528290	July 1, 1990
<i>p</i> -Dinitrobenzene	male	100254	July 1, 1990
2,4-Dinitrotoluene	male	121142	August 20, 1999
2,6-Dinitrotoluene	male	606202	August 20, 1999
Dinitrotoluene (technical grade)	female, male	---	August 20, 1999
Dinocap	developmental	39300453	April 1, 1990
Dinoseb	developmental, male	88857	January 1, 1989
Diphenylhydantoin (Phenytoin)	developmental	57410	July 1, 1987
Disodium cyanodithioimidocarbonate	developmental	138932	March 30, 1999
Doxorubicin hydrochloride	developmental, male	23214928	January 29, 1999
Doxycycline (internal use)	developmental	564250	July 1, 1990
Doxycycline calcium (internal use)	developmental	94088854	January 1, 1992
Doxycycline hyclate (internal use)	developmental	24390145	October 1, 1991
Doxycycline monohydrate (internal use)	developmental	17086281	October 1, 1991
Endrin	developmental	72208	May 15, 1998
Epichlorohydrin	male	106898	September 1, 1996
Ergotamine tartrate	developmental	379793	April 1, 1990
Estropipate	developmental	7280377	August 26, 1997
Ethionamide	developmental	536334	August 26, 1997
Ethyl alcohol in alcoholic beverages	developmental	---	October 1, 1987
Ethyl dipropylthiocarbamate	developmental	759944	April 27, 1999
Ethylene dibromide	developmental, male	106934	May 15, 1998
Ethylene glycol monoethyl ether	developmental, male	110805	January 1, 1989
Ethylene glycol monomethyl ether	developmental, male	109864	January 1, 1989
Ethylene glycol monoethyl ether acetate	developmental, male	111159	January 1, 1993
Ethylene glycol monomethyl ether acetate	developmental, male	110496	January 1, 1993
Ethylene oxide	female	75218	February 27, 1987
Ethylene thiourea	developmental	96457	January 1, 1993
Etodolac	developmental, female	41340254	August 20, 1999
Etoposide	developmental	33419420	July 1, 1990
Etretinate	developmental	54350480	July 1, 1987
Fenoxaprop ethyl	developmental	66441234	March 26, 1999
Filgrastim	developmental	121181531	February 27, 2001
Fluazifop butyl	developmental	69806504	November 6, 1998
Flunisolide	developmental, female	3385033	May 15, 1998
Fluorouracil	developmental	51218	January 1, 1989
Fluoxymesterone	developmental	76437	April 1, 1990
Flurazepam hydrochloride	developmental	1172185	October 1, 1992

Flurbiprofen	developmental, female	5104494	August 20, 1999
Flutamide	developmental	13311847	July 1, 1990
Fluticasone propionate	developmental	80474142	May 15, 1998
Fluvalinate	developmental	69409945	November 6, 1998
Ganciclovir sodium	developmental, male	82410320	August 26, 1997
Gemfibrozil	female, male	25812300	August 20, 1999
Goserelin acetate	developmental, female, male	65807025	August 26, 1997
Halazepam	developmental	23092173	July 1, 1990
Halobetasol propionate	developmental	66852548	August 20, 1999
Haloperidol	developmental, female	52868	January 29, 1999
Halothane	developmental	151677	September 1, 1996
Heptachlor	developmental	76448	August 20, 1999
Hexachlorobenzene	developmental	118741	January 1, 1989
Hexamethylphosphoramide	male	680319	October 1, 1994
Histrelin acetate	developmental	---	May 15, 1998
Hydramethynon	developmental, male	67485294	March 5, 1999
Hydroxyurea	developmental	127071	May 1, 1997
Idarubicin hydrochloride	developmental, male	57852570	August 20, 1999
Ifosfamide	developmental	3778732	July 1, 1990
Iodine-131	developmental	10043660	January 1, 1989
Isotretinoin	developmental	4759482	July 1, 1987
Lead	developmental, female, male	---	February 27, 1987
Leuprolide acetate	developmental, female, male	74381536	August 26, 1997
Levodopa	developmental	59927	January 29, 1999
Levonorgestrel implants	female	797637	May 15, 1998
Linuron	developmental	330552	March 19, 1999
Lithium carbonate	developmental	554132	January 1, 1991
Lithium citrate	developmental	919164	January 1, 1991
Lorazepam	developmental	846491	July 1, 1990
Lovastatin	developmental	75330755	October 1, 1992
Mebendazole	developmental	31431397	August 20, 1999
Medroxyprogesterone acetate	developmental	71589	April 1, 1990
Megestrol acetate	developmental	595335	January 1, 1991
Melphalan	developmental	148823	July 1, 1990
Menotropins	developmental	9002680	April 1, 1990
Meprobamate	developmental	57534	January 1, 1992
Mercaptopurine	developmental	6112761	July 1, 1990
Mercury and mercury compounds	developmental	---	July 1, 1990
Methacycline hydrochloride	developmental	3963959	January 1, 1991
Metham sodium	developmental	137428	May 15, 1998
Methazole	developmental	20354261	December 1, 1999
Methimazole	developmental	60560	July 1, 1990
Methotrexate	developmental	59052	January 1, 1989
Methotrexate sodium	developmental	15475566	April 1, 1990
Methyl bromide as a structural fumigant	developmental	74839	January 1, 1993
Methyl chloride	developmental	74873	March 10, 2000
Methyl mercury	developmental	---	July 1, 1987

N-Methylpyrrolidone	developmental	872504	June 15, 2001
Methyltestosterone	developmental	58184	April 1, 1990
Metiram	developmental	9006422	March 30, 1999
Midazolam hydrochloride	developmental	59467968	July 1, 1990
Minocycline hydrochloride (internal use)	developmental	13614987	January 1, 1992
Misoprostol	developmental	59122462	April 1, 1990
Mitoxantrone hydrochloride	developmental	70476823	July 1, 1990
Myclobutanil	developmental, male	88671890	April 16, 1999
Nabam	developmental	142596	March 30, 1999
Nafarelin acetate	developmental	86220420	April 1, 1990
Neomycin sulfate (internal use)	developmental	1405103	October 1, 1992
Netilmicin sulfate	developmental	56391572	July 1, 1990
Nickel carbonyl	developmental	13463393	September 1, 1996
Nicotine	developmental	54115	April 1, 1990
Nifedipine	developmental, female, male	21829254	January 29, 1999
Nimodipine	developmental	66085594	April 24, 2001
Nitrapyrin	developmental	1929824	March 30, 1999
Nitrofurantoin	male	67209	April 1, 1991
Nitrogen mustard (Mechlorethamine)	developmental	51752	January 1, 1989
Nitrogen mustard hydrochloride (Mechlorethamine hydrochloride)	developmental	55867	July 1, 1990
Norethisterone (Norethindrone)	developmental	68224	April 1, 1990
Norethisterone acetate (Norethindrone acetate)	developmental	51989	October 1, 1991
Norethisterone (Norethindrone) /Ethinyl estradiol	developmental	68224/57636	April 1, 1990
Norethisterone (Norethindrone) /Mestranol	developmental	68224/72333	April 1, 1990
Norgestrel	developmental	6533002	April 1, 1990
Oxadiazon	developmental	19666309	May 15, 1998
Oxazepam	developmental	604751	October 1, 1992
Oxydemeton methyl	female, male	301122	November 6, 1998
Oxymetholone	developmental	434071	May 1, 1997
Oxytetracycline (internal use)	developmental	79572	January 1, 1991
Oxytetracycline hydrochloride (internal use)	developmental	2058460	October 1, 1991
Paclitaxel	developmental, female, male	33069624	August 26, 1997
Paramethadione	developmental	115673	July 1, 1990
Penicillamine	developmental	52675	January 1, 1991
Pentobarbital sodium	developmental	57330	July 1, 1990
Pentostatin	developmental	53910251	September 1, 1996
Phenacemide	developmental	63989	July 1, 1990
Phenprocoumon	developmental	435972	October 1, 1992
Pimozone	developmental, female	2062784	August 20, 1999
Pipobroman	developmental	54911	July 1, 1990
Plicamycin	developmental	18378897	April 1, 1990
Polybrominated biphenyls	developmental	---	October 1, 1994
Polychlorinated biphenyls	developmental	---	January 1, 1991
Potassium dimethyldithio-	developmental	128030	March 30 1999

carbamate			
Pravastatin sodium	developmental	81131706	March 3, 2000
Prednisolone sodium phosphate	developmental	125020	August 20, 1999
Procarbazine hydrochloride	developmental	366701	July 1, 1990
Propargite	developmental	2312358	June 15, 1999
Propylthiouracil	developmental	51525	July 1, 1990
Pyrimethamine	developmental	58140	January 29, 1999
Quazepam	developmental	36735225	August 26, 1997
Quizalofop-ethyl	male	76578148	December 24, 1999
Resmethrin	developmental	10453868	November 6, 1998
Retinol/retinyl esters, when in daily dosages in excess of 10,000 IU, or 3,000 retinol equivalents. (NOTE: Retinol/retinyl esters are required and essential for maintenance of normal reproductive function. The recommended daily level during pregnancy is 8,000 IU.)	developmental developmental	---	July 1, 1989
Ribavirin	developmental	36791045	April 1, 1990
Rifampin	male	36791045	February 27, 2001
Rifampin	developmental, female	13292461	February 27, 2001
Secobarbital sodium	developmental	309433	October 1, 1992
Sermorelin acetate	developmental	---	August 20, 1999
Sodium dimethyldithiocarbamate	developmental	128041	March 30 1999
Sodium fluoroacetate	male	62748	November 6, 1998
Streptomycin sulfate	developmental	3810740	January 1, 1991
Streptozocin (streptozotocin)	developmental, female, male	18883664	August 20, 1999
Sulfasalazine	male	599791	January 29, 1999
Sulindac	developmental, female	38194502	January 29, 1999
Tamoxifen citrate	developmental	54965241	July 1, 1990
Temazepam	developmental	846504	April 1, 1990
Teniposide	developmental	29767202	September 1, 1996
Terbacil	developmental	5902512	May 18, 1999
Testosterone cypionate	developmental	58208	October 1, 1991
Testosterone enanthate	developmental	315377	April 1, 1990
2,3,7,8-Tetrachlorodibenzo-para-dioxin (TCDD)	developmental	1746016	April 1, 1991
Tetracycline (internal use)	developmental	60548	October 1, 1991
Tetracyclines (internal use)	developmental	---	October 1, 1992
Tetracycline hydrochloride (internal use)	developmental	64755	January 1, 1991
Thalidomide	developmental	50351	July 1, 1987
Thioguanine	developmental	154427	July 1, 1990
Thiophanate methyl	female, male	23564058	May 18, 1999
Tobacco smoke (primary)	developmental, female, male	---	April 1, 1988
Tobramycin sulfate	developmental	49842071	July 1, 1990
Toluene	developmental	108883	January 1, 1991

Triadimefon	developmental, female, male	43121433	March 30, 1999
Triazolam	developmental	28911015	April 1, 1990
Tributyltin methacrylate	developmental	2155706	December 1, 1999
Trientine hydrochloride	developmental	38260014	February 27, 2001
Triforine	developmental	26644462	June 18, 1999
Trilostane	developmental	13647353	April 1, 1990
Trimethadione	developmental	127480	January 1, 1991
Trimetrexate glucuronate	developmental	82952645	August 26, 1997
Triphenyltin hydroxide	developmental	76879	March 18, 2002
Uracil mustard	developmental, female, male	66751	January 1, 1992
Urethane	developmental	51796	October 1, 1994
Urofollitropin	developmental	97048130	April 1, 1990
Valproate (Valproic acid)	developmental	99661	July 1, 1987
Vinblastine sulfate	developmental	143679	July 1, 1990
Vinclozolin	developmental	50471448	May 15, 1998
Vincristine sulfate	developmental	2068782	July 1, 1990
Warfarin	developmental	81812	July 1, 1987
Zileuton	developmental, female	111406872	December 22, 2000

Date: July 11, 2003